

EXHIBIT 7-A

JLC Workbook
Research re EPA Responses

A. EPA RESPONSES

1. Response of Cliffs Mining Company to Request for Information Pursuant to Section 104(e) of Comprehensive Environmental Response, Compensation and Liability Act (“CERCLA”)
2. Response of Maxus Energy Corporation to Request for Information Pursuant to Section 104(e) of CERCLA
3. Response of Wisconsin Electric Company and Wisconsin Gas LLC to USEPA 104(e) Information Request
4. Securities and Exchange Commission Report
5. CSXT (Railroad) EPA Response

B. HISTORY

6. Condensed Summary of Plant History
7. History Timeline
8. Early History
9. History of the Milwaukee Solvay Coke Company

C. REPORTS

10. Brown’s Directory Notes
11. 1959 Report
12. Discussion of Cost Savings Using Coke Over Gas vs. Natural Gas
13. 1961 Report
14. 1962 Annual Report
15. 1966 By-Products Report

16. 1966 Operating Memorandum No. 1
17. 1967 Pollution Report
18. 1968 Operations Report
19. 1969 Capacity/Production Report
20. Coke Plant Operations
21. 1972 Operations
22. 1973/74 Comparison
23. 1975 PM Internal Audit
24. 1983 Plan of Disposition
25. Foundry Information
26. Newport Report

D. NEWSLETTERS

27. Gas News Centennial Issue – March 1952
28. Milwaukee Solvay News

E. INTERVIEWS

29. MMC Notes re Discussion with Richard Schlidt
30. Clausen Interview

F. Various Newspaper Articles

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November 12, 2004

VIA FACSIMILE W/O ENCLS. AND
FEDERAL EXPRESS W/ENCLS.

Mr. Craig Melodia
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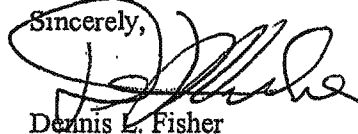
Re: Response to Section 104(e) Information Request for Solvay Coke and Gas,
Milwaukee, Wisconsin

Dear Craig:

I am enclosing with the courier copy of this letter the narrative response of Cliffs Mining Company to the Section 104(e) Request relating to the Solvay Coke and Gas Plant in Milwaukee, Wisconsin. Also incorporated as part of Cliffs Mining's response are three (3) boxes of documents which are separately being shipped by Federal Express for delivery on Monday.

As I have stated in the Response, Cliffs Mining Company continues to search for records within and outside the Company and will provide a supplement if additional information or documents responsive to the questions in the Request are obtained. If you have questions regarding particular responses, please contact me at your convenience.

Sincerely,



Dennis L. Fisher

cc: David Crouch (via facsimile and U.S. Mail w/copy of Response only)

#5984.00

**UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5**

**RESPONSE OF CLIFFS MINING COMPANY TO
REQUEST FOR INFORMATION PURSUANT
TO SECTION 104(e) OF CERCLA**

Cliffs Mining Company, a wholly-owned subsidiary of Cleveland Cliffs, Inc., by its attorneys, Dennis L. Fisher and Meissner Tierney Fisher & Nichols S.C., hereby responds to the letter Request for Information pursuant to Section 104(e) of CERCLA, 42 U.S.C. §9604(e), dated August 26, 2004 (the "Request"). This response is organized into an introduction section, a sequence of specific responses corresponding to the numbered questions in the Request, and a conclusion.

I. INTRODUCTION.

Cliffs Mining Company is an Ohio corporation which acquired all of the outstanding stock of Pickands Mather & Co., a Delaware corporation, on or about December 30, 1986. Pickands Mather & Co. had owned and operated the Milwaukee Solvay Coke plant via an asset purchase on or about January 1, 1973 until approximately March, 1983, when the plant ceased its active operation. After its 1986 acquisition of Pickands Mather & Co., Cliffs Mining Company merged in 1989 into Cleveland Cliffs, Inc.

Pickands Mather & Co., which had been a wholly-owned subsidiary of Cliffs Mining Company, thus became a wholly-owned subsidiary of Cleveland Cliffs as a result of the merger of Cliffs Mining Company into Cleveland Cliffs. On or about March 1, 1991, Pickands Mather & Co. changed its name to "Cliffs Mining Company," which is the entity responding to the Request (hereinafter referred to as "Cliffs Mining").

In tracing the history of owners and operators of the Solvay Coke plant site (the "Site"), three factors need to be kept in mind:

- (1) The Site now consists of roughly 46 acres, but the real estate owned by the

entities which operated the coke plant has changed considerably over time, with certain parcels being added or removed from the plant's inception in approximately 1903 to its cessation of business in 1983. Some portions of the Site as now constituted were previously owned for extended periods by entities with their own industrial or commercial activities being conducted on their property.

(2) There were numerous acquisitions and mergers during the active life of the plant, with two asset sales (as opposed to stock sales) in which the name "Milwaukee Solvay Coke Company" was one of the assets being sold. Similarly, the second asset sale, on or about January 1, 1973, included the name, "Pickands Mather & Co." Thus there were two entirely different entities using the name "Pickands Mather & Co." that owned and operated the Solvay Coke plant, one of which is now Cliffs Mining Company (for 1973-1983). The other one, as explained in more detail in responses to question nos. 4 and 5, is now Maxus Energy Corporation, a Delaware corporation currently believed to be owned by YPF Sociedad Anonima, an Argentine company (for 1962-1972).

(3) The Cliffs Mining era of operation (1973-1983), unlike prior operational eras, required air and water quality permits for waste discharges as well as heightened regulatory scrutiny of plant operations at both the federal and state levels.

The answers being provided are based upon information gathered from the records of Cliffs Mining and from various public records. Copies of these records are contained in three boxes of documents being simultaneously shipped via Federal Express. Cliffs Mining and its undersigned counsel continue to review and seek information from various sources. Such new information may cause Cliffs Mining to amend the answers set forth in this response. Copies of additional documents reviewed in connection with Cliffs Mining's continuing search for information will be provided as a supplement to this response if they appear to be pertinent to the questions asked in the Request.

II. SPECIFIC RESPONSES.

Question No. 1: Did you ever use, purchase, store, treat, dispose, transport or otherwise handle any materials, including hazardous substances, at the Site. If the answer to the preceding questions is anything but an unqualified “no”, identify:

- (a) the chemical composition, characteristics, physical state (e.g., solid, liquid) of each material;
- (b) who supplied you with such material;
- (c) how such materials were used, purchased, generated, stored, treated, transported, disposed of or otherwise handled by you;
- (d) when such materials were used, purchased, generated, stored, treated, transported, disposed of or otherwise handled by you;
- (e) where such materials were used, purchased, generated, stored, treated, transported, disposed of or otherwise handled by you;
- (f) the quantity of such materials used, purchased, generated, stored, treated, transported, disposed of or otherwise handled by you.

Answer to Question No. 1: Yes.

Answer to subparts a), b) and f).

We have not found records which detail the quantities and precise composition of raw materials and operational supplies purchased by the various owners and operators from 1903 to 1983. Nor have we found production records year-by-year for coke, manufactured gas or other by-products of the coking process. With the exception of reports to the Wisconsin Department of Natural Resources in the 1970's up to 1983, we have also no company records of waste handling or disposal.

However, there are partial sources of such information. These are:

(1) Invoices, purchase orders and other records of purchases of supplies and equipment are still located on the Solvay plant grounds in the office building, engineering building and perhaps elsewhere. Most of these records, not surprisingly, relate to the last two or three years of operation, 1981 to early 1983. Some relate to earlier periods. Cliffs Mining has not reviewed all of these records, but from those reviewed to date, we did not find primary production records but rather records of incidental supplies and equipment needed for day-to-day operation. Pursuant to a verbal commitment by Thomas Short, the manager of the Site for the current owner, Golden Marina Causeway LLC, we understand that these records will be maintained at the Site and made available for inspection by EPA personnel.

(2) Secondary sources of production information are contained in various reports and articles, including audit reports for certain years. Copies of these reports and articles are included in the documents being submitted with these responses. An example is the "Report on the Operations of Milwaukee Solvay Coke Company" prepared for American Natural Gas Company of Detroit, MI, in June 1959. That report chronicles, among other things, sales of coke of various types during the years 1950 through 1958. This report also indicates that at the time, by-products being recovered for sale included naphthalene, ammonia, benzol, toluol, and mixed xylol. Sulfur was not recovered but left in the gas. Waste liquor was disposed of to the sewerage system that connected to the public wastewater treatment plant.

(3) Records pertaining to the plant closing in 1983 show the static amounts of various products such as coal, coke, coke breeze and coal tar being removed from the Site. These records are also being submitted herewith.

More quantitative information may still be located as new sources are reviewed.

Answer to Subpart c).

The Solvay Coke plant produced two primary products by heating coal, those

being coke and manufactured gas. Coal was of course the major raw material. Coal was obtained from various mines and was delivered in large volumes to the plant by rail and by boat. Extensive areas of the Site were utilized for coal storage and handling. Railroads such as the Pere Marquette Railway and the Chesapeake and Ohio Railroad maintained side tracks on property which they owned for many years but are now included within the Site.

The coal was crushed, pulverized and moved to the coke oven line. There it was delivered into the ovens by lorries moving along the top of the ovens where ports were opened to allow measured quantities to enter the oven chambers. As the coal was heated, the gas produced was drawn through vents into retorts where various substances were reclaimed, such as tar and light oils. Further fractioning produced saleable by-products such as benzol, toluol and xylol. The remaining gas was, depending on the time period, sold to the sewerage commission, which could utilize it in its drying house without filtering out the sulfur, or sold to the public for heat and light after filtration at the Third Ward manufactured gas plant operated by Milwaukee Gas Light Company, a sister company to Milwaukee Solvay Coke Company for many years prior to 1962. The coke was sold to steel companies and foundries, typically transported by boat, rail or truck.

The production process is described in more detail in some of the reports and articles submitted separately. In general, every material generated from the heating of coal that could be separated and sold commercially was utilized in that fashion. The only record references to waste disposal practices are the descriptions of the gas being filtered at another location by an affiliated company (Milwaukee Gas Light Company), the disposal to the sewerage system of waste liquor, and the particulates which were emitted from the smokestacks.

Answer to Subpart d).

Cliffs Mining was involved in operating the Site only from 1973 to 1983. Cliffs Mining had no ownership or operational interest in the Site to its knowledge during the preceding

70 years of operations of the Solvay Coke Plant. In 1983, Cliffs Mining (then known as Pickands Mather & Co.), sold the Site to a Wisconsin partnership known as Wisconsin Wrecking Company, whose partners were Marko and Thomas Gerovac. The sale documents included a Lease/Purchase Agreement dated June 7, 1983 (a short form of which was recorded with the Milwaukee County Register of Deeds office in reel 1605, images 1814 to 1018, as document no. 5686638), a Bill of Sale for the buildings, structures, equipment and personal property, and an Agreement for removal of personal property and demolition of buildings and tanks on the Site by Wisconsin Wrecking.

Pursuant to the sale documents, coal tars in numerous pipes and aboveground storage tanks were to be moved to a large circular 500,000 gallon storage tank, which was to be emptied and demolished by Pickands Mather & Co. Also, for a period of up to two (2) years, Pickands Mather & Co. was allowed to organize and sell, to the extent possible, all remaining coal, coke, coke breeze and tar.

Pickands Mather & Co. did collect and sell coal, coke, coke breeze, and tar from the Site after June 27, 1983, as documented in records included with this response. Wisconsin Wrecking, however, did not complete the removal of buildings and structures as required by the sale documents.

As described in more detail in the response to question No. 3, Cliffs Mining conveyed all of its interest in the Site to Water Street Holdings by Quit Claim Deed dated January 24, 2003. Wisconsin Wrecking assigned all of its interests to the Site as the purchaser under the Lease/Purchase Agreement to Water Street Holdings, LLC on or about the same date. Water Street Holdings, LLC, having united the title, subsequently conveyed the Site to Golden Marina Causeway, LLC by warranty deed. All removal activities at the Site from and after January 24, 2003 have been conducted by Golden Marina Causeway LLC and Water Street Holdings LLC through their authorized contractors and agents.

Copies of the sale agreements between Pickands Mather & Co. and Wisconsin Wrecking and subsequent deeds and other transfer documents are included with the documents submitted herewith.

Answer to Subpart e).

As previously indicated, the manufacturing process of the Solvay Coke plant was for coal to be transported, stored, crushed, pulverized, and delivered into the coke ovens at the Site. The coke, gas, and various by-products recovered from the coking process were sold to customers, being transported offsite by ship, rail, truck, or in the case of the gas, by pipe. Temporary storage of by-products occurred in tanks at the Site. Waste liquor was discharged to the sewerage system. Cliffs Mining believes, but did not find records of substantiation, that office wastes were disposed of by commercial waste haulers, which were also likely utilized for miscellaneous garbage such as lunchroom wastes.

Question No. 2: State the dates during which you owned, operated, or leased the Site and provide copies of all documents evidencing or relating to such ownership, operation, or lease arrangement (e.g., deeds, leases, etc.).

Answer to Question No. 2:

In 1962, the company named Milwaukee Solvay Coke Company, which then owned some, but not all of, the Site, appears to have been a subsidiary of American Natural Gas Company in Detroit, a successor to the American Light and Traction Company, which had acquired all of the shares of Milwaukee Coke and Gas Co. in 1928. Milwaukee Coke & Gas Co. had changed its name to Milwaukee Solvay Coke Co. in 1942.

A new company called Wisconsin Coke Company ("Wisconsin Coke") was incorporated in Wisconsin on April 13, 1962. Wisconsin Coke purchased all of the assets of Milwaukee

Solvay Coke Co., including real estate and the name, "Milwaukee Solvay Coke Company." The old corporation which sold the assets including the company name was dissolved. Wisconsin Coke, after acquiring the name, changed its name to Milwaukee Solvay Coke Company.

This new Milwaukee Solvay Coke Company merged into a Maryland Corporation, Manganese Chemical Corporation, in 1966. Later in 1966, Manganese Chemical Corporation merged into Pickands Mather & Co. ("old Pickands Mather").

Thereafter, in 1968, PM Merger Corp. was incorporated in Delaware as a wholly-owned subsidiary of Diamond Shamrock Corporation. Pursuant to an Amended Plan and Agreement of Reorganization by and among Diamond Shamrock Corporation, PM Merger Corp. and old Pickands Mather, made as of August 28, 1968, PM Merger Corp. merged into old Pickands Mather and Diamond Shamrock became the sole owner of all of the outstanding shares of old Pickands Mather.

Cliffs Mining's ownership arose in 1973 by a convoluted pathway. Moore McCormack Resources, Inc. ("Moore-Mac"), a Delaware corporation, decided to purchase some, but not all, of the assets of old Pickands Mather. The assets purchased included the Solvay Coke Plant and the name Pickands Mather & Co., which were acquired on or about January 1, 1973. However, Moore-Mac quickly formed a new subsidiary initially named PM Holding Company. The assets of old Pickands Mather (including the name "Pickands Mather & Co.") were transferred to PM Holding Company, which then changed its name on April 4, 1973 to Pickands Mather & Co. This is the "new" Pickands Mather & Co. acquired by Cliffs Mining Company in 1986, and which changed its name to Cliffs Mining Company in 1991.

The Solvay Coke Plant operating assets, including the real estate, become part of the new Pickands Mather & Co., now known as Cliffs Mining Company. As indicated in response to Subparts d) and e), the Site was sold to Wisconsin Wrecking in March 1983 under a land contract form of sale. Questions later arose as to the status of title between Wisconsin Wrecking and

Cliffs Mining, but all of the title interests were united in the current owner by the conveyance from both Cliffs Mining and Wisconsin Wrecking to Water Street Holdings LLC, which in turn conveyed all of its interests to Golden Marina Causeway LLC.

In the meantime, the assets not sold by old Pickands Mather to Moore-Mac in 1973 (believed to be primarily oil and gas resources as opposed to mining related properties) were retained by old Pickands Mather, which needed to, and did, change its name. The company was renamed "Emerald Mining Company" and was ultimately merged into Maxus Energy Corporation, a Delaware corporation still in existence.

Records documenting these complex and voluminous asset transfers, mergers, reorganizations and name changes are included in the accompanying production of documents.

Question No. 3: Identify all persons having knowledge or information about the generation, transportation, treatment, disposal, or other handling of hazardous substances by you, your contractors, lessors, or by prior owners or operators at the Site.

Answer to Question No. 3:

Cliffs Mining does not know the identities of persons who may have knowledge about the generation, transportation, treatment, disposal, or other handling of hazardous substances by prior owners or operators at the Site. With respect to the period of ownership by new Pickands Mather & Co., now known as Cliffs Mining Company, we have submitted with the accompanying records the Affidavits of Richard Schlidt and Harold Falkowski. Mr. Schlidt is known to be still living in the Milwaukee area. Cliffs Mining is unaware of the status of Mr. Falkowski.

Question No. 4: Identify the prior owners of the Site. For each prior owner, further identify:

- (a) the dates of ownership;
- (b) all evidence showing that they controlled access to the Site; and
- (c) all evidence that a hazardous substance, pollutant, or contaminant, was

released or threatened to be released at the Site during the period that they owned the Site.

Answer to Question No. 4:

Answer to Subparts a) and b):

See the chart attached as Attachment A to this response and the records which are being submitted herewith in separate boxes. Attachment A chronicles the succession of owner-operators of the Solvay Coke Plant and its immediate environs. Prior owners of the real estate which is now encompassed by the Site also include many other individuals and entities which were identified in the real estate title history search performed by EPA's consultant. These include, but are not limited to, the Milwaukee Electric Railroad and Light Company (now known as WE Energies Corp.), the Chesapeake and Ohio Railroad (now known as CSX Corp.), Thomas Furnace Company, Suhm Leather Company and the Fred Reuping Leather Company.

Answer to Subpart c):

The evidence of releases of a hazardous substance, pollutant or contaminant in soil or groundwater are to date the observations of EPA's personnel and consulting contractors during a visual inspection on October 25, 2001 and the results of subsurface soil and groundwater sampling during the period of December 10 - 19, 2001, the laboratory results for which were reported in the Site Assessment Report prepared for EPA by Tetra-Tech EM Inc., project TDD No. 505-0110-013, in May 2002.

Inferences from the data reported by Tetra-Tech and the accompanying maps, charts, and aerial photographs in its report suggest that one or more releases of hazardous substances may have occurred at some time in the past and may have resulted in the presence of some levels of hazardous substance in certain areas of the soil and groundwater. Additional investigation needs to be performed to verify that evidence of contamination of soil and/or groundwater due to prior releases of hazardous substances indeed exists on the Site, and the

location and extent of such contamination, if any.

To the extent the Tetra-Tech report revealed the existence of hazardous substances above the ground surface which posed a threat of harm to human health or the environment, those findings were the basis of the Administrative Order by Consent effective February 14, 2003, signed by Cliffs Mining, Water Street Holdings and Wisconsin Wrecking (the "AOC"). The removal actions encompassed by the AOC, including removal of asbestos-containing materials, coal tars and other substances in tanks and associated piping, an oozing pit area, and surface accumulations of materials leaking from tanks, has been completed and is in the process of being summarized in a Final Report to be submitted to EPA.

Question No. 5: Identify the prior operators, including lessors, of the Site.

For each operator, further identify:

- (a) the dates of operation;
- (b) the nature of prior operations at the Site;
- (c) all evidence that they controlled access to the Site;
- (d) all evidence that a hazardous substance, pollutant, or contaminant was released or threatened to be released at or from the Site and/or its solid waste units during the period that they were operating the Site.

Answer to Question No. 5: The prior operators of the Site are the owners-operators of the Solvay Coke Plant identified in response to question no. 4. Historical reports indicate that the basic process of producing gas and coke at the plant were undertaken by all owner-operators of the plant. Technological changes were incorporated over the years. During the Cliffs Mining operation in 1973-1983, the magnitude of the operation was reduced (from 200 ovens to 100 ovens) and waste disposal to air and water was regulated by permits.

Certain parent or other affiliated entities of the prior owners-operators may also qualify as operators of the Site. Examples of such entities are American Natural Resources and

Moore McCormack Resources, Inc.

Question No. 6: Have you or any other person working with you or on your behalf ever accepted waste materials, including hazardous substances, for transportation to the Site from any person? If the answer to this question is anything but an unequivocal “no”, identify:

- (a) the persons from whom you or such other persons accepted waste materials for transport to the Site;
- (b) every date on which waste materials were so accepted or transported;
- (c) for each transaction, the nature of the waste materials accepted or transported, including the chemical content, characteristics, physical state (e.g., solid, liquid), and the process for which the material was used or the process which generated the material;
- (d) for each material, described any warnings given to you with respect to its handling;
- (e) the owner of the materials so accepted or transported;
- (f) the quantity of the material involved (weight or volume) in each transaction and the total quantity for all transactions.

Answer to Question No. 6: Cliffs Mining Company has no knowledge that the company or its agents ever accepted waste materials for transportation to the Site from any person.

Question No. 7: Identify all persons, including yourself, who may have arranged for disposal or treatment or arranged for transportation for disposal or treatment of waste materials, including hazardous substances, at the Site. In addition, identify the following:

- (a) the persons with whom you or such other persons made such arrangements;
- (b) every date on which such arrangements took place;
- (c) for each transaction, the nature of the waste material or hazardous

substance; including the chemical content, characteristics, physical state (e.g., solid, liquid) and the process for which the substance was used or the process which generated the substance;

- (d) the owner of the waste materials or hazardous substances so accepted or transported;
- (e) the quantity of the waste materials or hazardous substances involved (weight or volume) in each transaction and the total quantity for all transactions;
- (f) the person(s) who selected the Site as the place to which the waste materials or hazardous substances were to be transported;
- (g) where the person identified in (f) above intended to have such hazardous substances or waste materials transported and all evidence of this intent;
- (h) what was actually done to the waste materials or hazardous substances once they were brought to the Site;
- (i) the final disposition of each of the waste materials or hazardous substances involved in such transactions;
- (j) the measures taken by you to determine the actual methods, means, and site of treatment or disposal of the waste material and hazardous substances involved in each transaction;
- (k) the type and number of containers in which the waste materials or hazardous substances were contained when they were accepted for transport, and subsequently until they were deposited at the Site, and all markings on such containers;
- (l) the price paid for (i) transport or (ii) disposal of (iii) or both, of each waste material and hazardous substance;
- (m) all documents containing information responsive to (a) - (l) above, or in lieu of identification of all relevant documents, provide copies of all such documents;
- (n) all persons with knowledge, information, or documents responsive to (a) - (l) above.

Answer to Question No. 7: Cliffs Mining Company has no knowledge of persons who may have arranged for disposal or treatment, or arranged for transportation for disposal or treatment of waste materials, including hazardous substances, at the Site. Certain materials, such as railroad tracks and steel poles, were transported to the Site by Wisconsin Wrecking Company to stockpile for recycling, but Cliffs Mining has no knowledge that any such materials were “waste materials” or included hazardous waste.

Question No. 8: Identify the acts or omissions of any person, other than your employees, contractors, or agents, that may have caused the release or threat of release of hazardous substances, pollutants, or contaminants, and damages resulting therefrom.

Answer to Question No. 8: The only acts or omissions of other persons to the knowledge of Cliffs Mining which may have caused the release or threat of release of hazardous substances, pollutants or contaminants and damages resulting therefrom at the Site consisted of certain actions and inactions by Wisconsin Wrecking Company. The actions included partial demolition of some aboveground tanks without totally dismantling the same or removing the contents thereof, which resulted in accumulation of rainwater and overflows to the ground containing mixtures of water and tank contents. Another action consisted of demolition of certain structures after the EPA onsite inspection on October 25, 2001, which resulted in asbestos-containing materials being broken into pieces and falling into the soil where weathering and erosion may have caused the ACM to move below the surface or disintegrate into smaller pieces. Inaction by Wisconsin Wrecking consisted of allowing leaks or overflows from aboveground tanks to occur without taking actions to prevent such leaks or overflows from continuing to occur.

To the extent such actions or omissions by Wisconsin Wrecking caused surface accumulations of hazardous substances, the removal actions recently completed by the owner, Golden Marina Causeway LLC, and its contractors have disposed of such accumulations without

further damage. But it remains unknown whether Wisconsin Wrecking's conduct has resulted in contamination of soil or groundwater.

Question No. 9: If you have reason to believe that there may be persons able to provide a more detailed or complete response to any Information Requests or who may be able to provide additional responsive documents, identify such persons.

Answer to Question No. 9: As indicated in the answers to questions Nos. 1 and 3, additional records pertaining to materials purchased and/or used at the Site are still located in one or more of the few remaining buildings on the Site and will be made available for inspection by the owner. Also, former employees Richard Schlidt and Harold Falkowski may provide additional information regarding the operations at the Solvay Coke plant. (Their last known addresses are stated in the affidavits included in the records being provided).

Investigation of other sources, including public records, is continuing, and this answer may be supplemented in the future.

Question No. 10: Provide copies of all local, state and federal environmental permits ever granted for the Facility or any part thereof (e.g., RCRA permits, NPDES permits, etc.).

Answer to Question No. 10: Copies of permits and related reports located by Cliffs Mining are included in the records being provided as part of this response.

III. CONCLUSION

The foregoing narrative answers provide generalized responses, with more detailed information being provided in the records submitted simultaneously with the written response. The information in the records is specifically incorporated into the response of Cliffs Mining Company. Further information and details are available in the records located in certain buildings on the Site and in the reports prepared for EPA by its consultants, specifically including the Site Assessment Report and the Title Search Report.

Cliffs Mining continues to search for sources of information that may be responsive to the questions posed in the Request. If such information or records are obtained, Cliffs Mining will supplement its response.

Dated this 12th day of November, 2004.

MEISSNER TIERNEY FISHER & NICHOLS S.C.

By: _____
Dennis L. Fisher

Attorneys for Cliffs Mining Company

CMT0003.DOC;1

CERTIFICATION

I hereby certify under potential penalty of law that the foregoing response and all documents accompanying this response, and incorporated as part of the response, were prepared or collected by me or under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted.

Based upon my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my current knowledge and belief, true, accurate, and complete, subject to ongoing efforts of Cliffs Mining Company or its undersigned counsel to locate, review and evaluate additional information, which may lead to supplementation of the present response. I am aware of significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

I am authorized by Cliffs Mining Company to certify this response.

Dated and signed this 12th day of November, 2004.

Dennis L. Fisher
Meissner Tierney Fisher & Nichols S.C.
Attorney for Cliffs Mining Company

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MAXUS ENERGY CORPORATION

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November 18, 2004

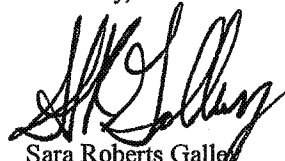
Craig Melodia, Esq.
Associate Regional Counsel
U.S. Environmental Protection Agency
Office of Regional Counsel (C-14J)
77 W. Jackson
Chicago, IL 60604

Dear Mr. Melodia:

Enclosed please find the response of Maxus Energy Corporation ("Maxus") to your Information Request, under Section 104(e) of the Comprehensive Environmental Response, Compensation and Liability Act, concerning the Solvay Coke and Gas Site in Milwaukee, Wisconsin.

I greatly appreciate your understanding of my scheduling conflicts which necessitated a delay in the timing of this response. Thank you very much for your cooperation, and should you have any questions concerning our response, please do not hesitate to contact me.

Sincerely,



Sara Roberts Galley
Environmental Counsel

Enclosure

Introduction

The Solvay Coke & Gas site (the "Site") is located at 311 East Greenfield Avenue, Milwaukee, Wisconsin. At various times, portions of the Site were owned or operated by various entities, including Pickands Mather & Co. ("PM-1"). From 1969 until 1973, Pickands Mather & Co. was a subsidiary of what was then Diamond Shamrock Corporation ("DSC"); PM-1 owned the Site (or a portion of the Site) at this time. During this period, the Site was operated by Milwaukee Solvay Coke Co. ("MSCC"), an unincorporated division of PM-1.

PM-1 was acquired by DSC through a stock acquisition transaction in January 1969. At that time, PM-1 already owned the Site, and its MSCC division was operating at the Site.

In April 1973, PM-1 sold substantially all of its assets, businesses, and associated liabilities to a subsidiary of Moore and McCormack Co., Inc. ("MM"); subsequent to the sale, PM-1 changed its name to Emerald Mining Company ("Emerald"). To our knowledge, the MM subsidiary changed its name to Pickands Mather & Co. ("PM-2") and carried on the businesses of PM-1, including the operations of the MSCC division at the Site, which was now the property of PM-2. The sale included, inter alia, all books and records of PM-1; therefore, Emerald and its successors retained very little information concerning the operations of PM-1, its MSCC division, or the Site.

To the best of Maxus' knowledge, PM-2 was acquired by Cleveland-Cliffs Inc. ("CCI") in 1986. CCI is the parent company of Cliffs Mining Company, which was the owner of record of the Site in 2003.

In 1986, Emerald was merged into Maxus Corporate Company, which was subsequently merged into Maxus Energy Corporation ("Maxus"), the former parent of DSC for three years from September 1983 until September 1986. As stated above, Maxus retains very little information concerning the operations of PM-1, the MSCC division, or the Site. No persons currently employed by Maxus have any personal knowledge of the operations of PM-1, the MSCC division, or the Site; all the information provided herein comes from documents in the possession of Maxus, as detailed below and provided as an attachment to this document.

Response to EPA Questions

Question 1:

Did you ever use, purchase, store, treat, dispose, transport or otherwise handle any materials, including hazardous substances, at the Site? If the answer to the preceding question is anything but an unqualified "no", identify:

- a) the chemical composition, characteristics, physical state (e.g., solid, liquid) of each material;*
- b) who supplied you with such material;*
- c) how such materials were used, purchased, generated, stored, treated, transported, disposed of or otherwise handled by you;*
- d) when such materials were used, purchased, generated, stored, treated, transported, disposed of or otherwise handled by you;*
- e) where such materials were used, purchased, generated, stored, treated, transported, disposed of or otherwise handled by you;*
- f) the quantity of such materials used, purchased, generated, stored, treated, transported, disposed of or otherwise handled by you.*

Response to question 1:

During the time PM-1 was owned by DSC, its unincorporated MSCC division (PM Divisions List) operated a foundry coke plant at the Site, and handled materials related to that operation.

- a) According to those few records now in the possession of Maxus, the principal raw material used at this plant was coal, and the principal products were foundry coke and other coke, and related coke by-products. No specific information is available as to the characteristics of these materials or the specific materials used or by-products produced.
- b) No specific information is available as to the supplier of the raw materials.
- c) As noted above, no information is available regarding the purchase of the raw materials. The facility operated approximately 200 coke ovens from 1967 through 1972; in 1973 the use of approximately 100 of these ovens was discontinued. The foundry coke was sold on the open market to various (unnamed) foundry operators, and the other coke and by-products were sold on the open market to unspecified other parties.
- d) The MSCC division operated the facility from at least 1966, through the sale of PM-1 in 1973. Maxus has no records which would indicate the date on which operations began at the facility, nor any records which would indicate the date on which these operations ceased.
- e) No information is available to indicate specific on-site locations of material handling, or the existence or location of any off-site material handling.
- f) The available records indicate that the facility had gross sales of \$12MM in 1966 and \$10.8MM in 1967. In 1967, production was 302,000 tons of foundry coke,

other coke, and related by-products, while in 1972, 311,000 tons of similar materials were produced. Capacity from 1973 forward, after the discontinuance of the obsolete ovens, was estimated to be 235,000 tons of product annually.

Documents responsive to question 1:

List of Unincorporated Ventures and Divisions, PM, February 12, 1973 (PM Divisions List).

1967 Annual Report of Pickands Mather & Co., p. 10. (PM 1967 Report).

Proxy Statement, Special Meeting of Diamond Shamrock Stockholders, November 27, 1968, p. 32 (DSC Proxy Statement).

Proxy Statement, Special Meeting of Moore and McCormack Stockholders, March 30, 1973, pp. 28, 33 (MM Proxy Statement).

Question 2:

State the dates during which you owned, operated, or leased the Site and provide copies of all documents evidencing or relating to such ownership, operation, or lease arrangement (e.g., deeds, leases, etc.).

Response to question 2:

The Site was owned by PM-1 and operated by its MSCC division at least as early as 1966, as indicated in the PM 1967 Report, and upon PM's acquisition by DSC in 1969 (DSC Proxy Statement). Maxus is not in possession of any leases, deeds, or other documentation that would indicate when or from whom PM-1 acquired the Site. The Site was transferred to PM-2 in April 1973 when all the assets and businesses of PM-1, including its MSCC division, were acquired by PM-2 and its parent, MM (MM Proxy Statement; MM Purchase Agreement). The transfer of the real property and other assets associated with the Site was accomplished through the use of a bill of sale, which is produced (MM Bill of Sale). Maxus does not have possession of copies of any deeds or other instruments concerning this property.

Documents responsive to question 2:

Purchase Agreement between PM-1 and MM, January 1, 1973 (MM Purchase Agreement).

Bill of Sale, PM-1 to MM, April 3, 1973 (MM Bill of Sale).

Question 3:

Identify all persons having knowledge or information about the generation, transportation, treatment, disposal, or other handling of hazardous substances by you, your contractors, lessors, or by prior owners or operators at the Site.

Response to question 3:

Maxus has no knowledge of the identity of persons having knowledge or information about the generation, transportation, treatment, disposal, or other handling of hazardous substances by any person at the Site. Maxus believes that persons having such knowledge or information became employees of PM-2 upon the 1973 transaction, and that PM-2 may have records of the identity of such persons (MM Purchase Agreement), but Maxus does not have any such records or information.

Question 4:

Identify the prior owners of the Site.

Response to question 4:

Maxus has no knowledge of the prior owners of the Site or their dates of ownership.

Question 5:

Identify the prior operators, including lessors, of the Site.

Response to question 5:

Maxus has no knowledge of any prior operators at the Site, their dates of operation or the nature of such operations, if any.

Question 6:

Have you or any other person working with you or on your behalf ever accepted waste materials, including hazardous substances, for transportation to the Site from any person?

Response to question 6:

Maxus has no information that would indicate that any waste materials have ever been transported to the Site.

Question 7:

Identify all persons, including yourself, who may have arranged for disposal or treatment or arranged for transportation for disposal or treatment of waste materials, including hazardous substances, at the Site.

Response to question 7:

Maxus has no information concerning the disposal, treatment, or arrangement for disposal or treatment, of waste materials, if any, at the Site.

Question 8:

Identify the acts or omissions of any person, other than your employees, contractors, or agents, that may have caused the release or threat of release of hazardous substances, pollutants, or contaminants, and damages resulting therefrom.

Response to question 8:

Maxus does not have any information whatsoever concerning the actions of any person other than its employees, contractors, or agents at the Site.

Question 9:

If you have reason to believe that there may be persons able to provide a more detailed or complete response to any Information Requests or who may be able to provide additional responsive documents, identify such persons.

Response to question 9:

Maxus believes that PM-2 is in possession of all books and records of PM-1 and its MSCC division, including all documents relating to the Site, which became its property through the 1973 transaction (MM Purchase Agreement). Maxus further believes that PM-2 was acquired by CCI, the parent company of Cliffs Mining Company (see CCI 8-K), in 1986 (see CCI Corporate History), and that PM-2 and/or CCI can provide a more detailed and complete response to any Information Requests and additional responsive documents. Maxus believes that CCI may be contacted at its corporate headquarters, at 1100 Superior Avenue, Cleveland, OH 44114 (CCI Corporate Contacts).

Documents responsive to question 9:

Form 8-K for Cleveland-Cliffs Inc., September 20, 2004 (CCI 8-K).
Corporate History of Cleveland-Cliffs Inc., p. 10 (CCI Corporate History).
Contact Information for Cleveland-Cliffs Inc. (CCI Corporate Contacts).

Question 10:

Provide copies of all local, state and federal environmental permits ever granted for the Facility or any part thereof (e.g., RCRA permits, NPDES permits, etc.).

Response to question 10:

Maxus has no knowledge of any environmental permits ever granted for the Facility or any part thereof, and has no such documents in its possession.

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**Response of
Wisconsin Electric Power Company and Wisconsin Gas LLC
to USEPA 104(e) Information Request
for the Solvay Coke and Gas Site, Milwaukee, Wisconsin**

Overview

As a preface to responding to the specific requests contained in U.S. EPA's 104(e) request regarding the Solvay Coke and Gas Site in Milwaukee, Wisconsin ("Site"), Respondents Wisconsin Electric Power Company ("Wisconsin Electric") and Wisconsin Gas LLC ("Wisconsin Gas") (both d/b/a We Energies) provide the following overview regarding the past operations of certain predecessors that either (1) owned property and had operations at a parcel of property within the Site boundaries; or (2) had a customer and corporate (e.g., parent, sister subsidiary) relationship with an entity that owned and operated the Site.

All future correspondence regarding this Site should be directed to counsel for Wisconsin Electric and Wisconsin Gas, as set forth in Response to Request No. 1 below.

(1) The Milwaukee Electric Railway & Light Co. (TMER&L) – Former Owner of Parcel Within Site Boundaries That Was Used as Material Yard and Coal Storage Yard

TMER&L was formed in 1896 to provide electric, steam and interurban rail service. As discussed below (see Response to Request No. 1), TMER&L owned a parcel of property that is within the Site boundaries from 1896 to 1936. The parcel initially served as a material yard in support of TMER&L's car station on the other (west) side of the tracks that form the west border of the Site. In 1917, the material yard was converted to a coal storage yard. TMER&L ceased using the coal yard in 1919 and dismantled it in 1929. TMER&L sold the parcel to the Pere Marquette Railway Company in 1936. TMER&L changed its name to Wisconsin Electric Power Company in 1938. Wisconsin Electric is one of the respondents to this request.

(2) Milwaukee Gas Light Company (MGL) – Sister Subsidiary and Parent Company (1947-1956) to Milwaukee Solvay Coke Company

From 1917 until the late 1950s, MGL was the sole customer of the coke oven gas produced by the Milwaukee Solvay Coke Company (Solvay). The gas was piped directly to MGL's Third Ward gas plant without conditioning. In 1947, MGL purchased approximately 20 percent of its gas supply needs from Solvay; by 1952, after the introduction of natural gas, this had been reduced to approximately 6 percent. Solvay's primary business (and the source of the majority of its operating revenue) was selling the coke, chemicals and coke by-products produced through the coking process to customers other than MGL.

MGL was a subsidiary of American Light and Traction Co. (AL&T). AL&T, which later changed its name to American Natural Gas Company (ANG), acquired the Milwaukee Coke & Gas Co. (l/k/a Solvay) in 1928. Milwaukee Coke/Solvay was a direct subsidiary of ANG, and a sister subsidiary to MGL, from 1928 until January 1947. Solvay would likely have remained a direct subsidiary of ANG, and a sister subsidiary of MGL, but for the Public Utilities Holding Company Act of 1935 (PUHCA) and the contemplated liquidation of ANG. The PUHCA placed restrictions on the type of businesses a utility holding company (such as ANG and its parent company) could own. Therefore, in January 1947, Solvay became a direct subsidiary of MGL (and an

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indirect subsidiary of ANG) pursuant to proceedings before the Securities and Exchange Commission (SEC) and the Wisconsin Public Service Commission (PSC). Pursuant to proceedings under the PUHCA, the SEC determined on January 22, 1954, that ANG could retain Solvay as a direct subsidiary. Solvay was subsequently transferred back to ANG through a transfer by dividends of all the shares of Solvay from MGL to ANG. The SEC and PSC approved this dividend plan in December 1954 and it was implemented over a period of time from 1955 through 1956.

Solvay remained a subsidiary of ANG until June 1, 1962, when Solvay was sold to Wisconsin Coke Company, Inc., a newly-formed subsidiary of Pickands Mather & Co. Solvay concurrently changed its name to MSC Corporation and Wisconsin Coke Company, Inc. changed its name to Milwaukee Solvay Coke Company, Inc. None of these entities have any relationship or connection to MGL.

To summarize, MGL was a customer, sister company and, from 1947-1956, a parent company to Solvay. MGL did not own the Solvay property, nor did MGL operate the Solvay coking operation, directly or indirectly.

Through a name change, MGL became the Wisconsin Gas Company effective December 30, 1965. Wisconsin Gas Co. changed its name to Wisconsin Gas LLC in 2004. Wisconsin Gas is one of the respondents to this request.

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Responses to 104(e) Requests

Documents which were contributing sources of information for the responses to these requests are included at Tab [#] where [#] corresponds to the request number.

The following people assisted in the preparation of this Response:

Mary Ann Barragry, Team Leader-Library & Research Services, We Energies

Carl Claussen, former officer of MGL and Solvay

Art Covi, Principal Engineer-Environmental, We Energies

Dick Dowdell, Manager-AQCS Projects, We Energies

Sue Fisher, Corporate Information Management, We Energies

Trent Kohl, Principal Engineer-Environmental, We Energies

Jim Lingle, Principal Environmental Chemist-Environmental, We Energies

Susan Martin, Counsel-Legal Services, We Energies

Grace Pink, Real Estate Analyst Clerk, Property Rights & Information, We Energies

These individuals may be contacted through counsel: Rachel A. Schneider, Quarles & Brady LLP, 411 East Wisconsin Avenue, Milwaukee, Wisconsin 53201, 414.277.5829, fax 414.978.8829, rschneider@quarles.com

Wisconsin Electric and Wisconsin Gas object to these information requests as overbroad, vague and burdensome to the extent they seek information not relevant to the purposes set forth in CERCLA §104(e)(2).

1. Did you ever use, purchase, store, treat, dispose, transport or otherwise handle any materials, including hazardous substances, at the Site? If the answer to the preceding question is anything but an unqualified "no", identify:
 - a) the chemical composition, characteristics, physical state (e.g., solid, liquid) of each material;
 - b) who supplied you with such material;
 - c) how such materials were used, purchased, generated, stored, treated, transported, disposed of or otherwise handled by you;
 - d) when such materials were used, purchased, generated, stored, treated, transported, disposed of or otherwise handled by you;
 - e) where such materials were used, purchased, generated, stored, treated, transported, disposed of or otherwise handled by you;
 - f) the quantity of such materials used, purchased, generated, stored, treated, transported, disposed of or otherwise handled by you.

Response to Request No. 1:

From 1896 to 1936, TMER&L owned a parcel of property that is within the Site boundaries ("TMER&L Parcel"). TMER&L operated its Kinnickinnic material yard at this location. Based on Sanborn maps, Wisconsin Electric believes that in 1910 the TMER&L Parcel housed a brass foundry, two tile conduits, a cement house, two propane tanks, a casting shed, and an oil platform. The Kinnickinnic car station was housed across the tracks to the west, but was not on the TMER&L Parcel or the Site.

In 1917, TMER&L dismantled the Kinnickinnic material yard and converted the TMER&L Parcel to a coal storage area known as the "K.K. Coal Yard." The coal yard was designed to store 46,000 tons of coal. Coal was shipped by barge and by utility cars to TMER&L power plants from this location. The K.K. Coal Yard was closed in July of 1919 and was dismantled in 1929. The TMER&L Parcel was sold in 1936 to the Pere Marquette Railway Company.

Copies of documents in the possession of Wisconsin Electric regarding the material yard and K.K. Coal Yard are included at Tab 1. Specific information regarding the materials used, handled and stored at the TMER&L Parcel, such as the information requested in subparts 1(a)-(f), is not available.

MGL purchased unconditioned coke oven gas from Solvay from approximately 1917 through the late 1950s. No analyses of the gas from that time is available. However, coke oven gas is similar to the gas produced in the manufactured gas process, which was commonly utilized in the first half of the 20th century. MGL processed the coke gas it purchased from Solvay at its Third Ward plant. During the later years of the contractual relationship between Milwaukee Solvay and MGL, the gas was sent directly to the City of Milwaukee Sewerage Commission.

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2. State the dates during which you owned, operated, or leased the Site and provide copies of all documents evidencing or relating to such ownership, operation, or lease arrangement (e.g., deeds, leases, etc.).

Response to Request No. 2:

See Response to Request No. 1.

3. Identify all persons having knowledge or information about the generation, transportation, treatment, disposal, or other handling of hazardous substances by you, your contractors, lessors, or by prior owners or operators at the Site.

Response to Request No. 3:

Due to the passage of time, Respondents are unable to provide responsive (e.g., living people) information to this request regarding the handling, etc. of any hazardous substances at the Site by TMER&L or by prior owners or operators at the Site, other than as may be identified or inferred from the documents included with this response.

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4. Identify the prior owners of the Site. For each prior owner, further identify:
- a) the dates of ownership;
 - b) all evidence showing that they controlled access to the Site; and,
 - c) all evidence that a hazardous substance, pollutant, or contaminant, was released or threatened to be released at the Site during the period that they owned the Site.

Response to Request No. 4:

Milwaukee Coke & Gas Company was incorporated on January 12, 1903, and acquired the property parcels comprising its operations through seven transactions between 1903 and 1920. Prior owners included: Illinois Steel Co., Serial Investment Co., August Uihlein & Wife, Harbor Land Co., Fred Vogel, Jr., L. J. Petit & Wife, and Alaska Land Co.

Milwaukee Solvay Coke Company was incorporated in 1906 and was a wholly owned subsidiary of Milwaukee Coke & Gas Company. It appears that something happened to Milwaukee Coke & Gas and sometime after 1934 Solvay became the contracting party and is that entity that continued to operate the vast majority of the Site until 1962. On June 1, 1962, Solvay's property was sold to Wisconsin Coke Company, Inc., a newly-formed subsidiary of Pickands-Mather & Co. On the same day, Solvay changed its name to MSC Corporation and Wisconsin Coke Company changed its name to Milwaukee Solvay Coke Company, Inc.

The Sanborn maps included at Tab 4 provide information regarding the prior owners for parcels (including the TMER&L Parcel – see Response to Request No. 1) comprising the Site, including Minerva Furnace, Thomas Furnace Co., Suhm Leather Co., Fred Rueping Leather Co., and Milwaukee Blast Furnace.

5. Identify the prior operators, including lessors, of the Site.

For each operator, further identify:

- a) the dates of operation;
- b) the nature of prior operations at the Site;
- c) all evidence that they controlled access to the Site;
- d) all evidence that a hazardous substance, pollutant, or contaminant was released or threatened to be released at or from the Site and/or its solid waste units during the period that they were operating the Site.

Response to Request No. 5:

The documents at Tab 5 generally describe the operations of the Milwaukee Solvay Coke Company (f/k/a Milwaukee Coke & Gas Company) at the Site. See also Response to Request No. 4 and documents at Tab 4 describing prior owners and some lessee information..

Based on Art Covi's personal observation from the street and railroad tracks, the Site was used as a concrete crushing plant during the 1990s and large piles of aggregate were accumulated on site from that process. By 2001, no observable stockpiling or disposal activities were apparent at the Site.

Respondents have no further information responsive to this request.

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SECURITIES AND EXCHANGE COMMISSION
Washington, D. C.
January 22, 1954

In the Matter of

UNITED LIGHT AND RAILWAYS COMPANY

AMERICAN LIGHT & TRACTION COMPANY

(NOW AMERICAN NATURAL GAS COMPANY)

File Nos. 59-11

59-17

54-25)

(Public Utility Holding Company Act of 1935)

Other Businesses Retainable

Where Commission has permitted retention, but reserved jurisdiction as to retainability, of coke company subsidiary of public utility which prior to utility's conversion to natural gas was utility's major gas supplier and since conversion sells part of its production of coke oven gas to utility for resale to municipal sewerage authority under contract providing for availability to utility in event of emergencies of all coke oven gas produced, held, under circumstances presented, continued retention of coke company permitted under "other business" clause of Section 11(b)(1) of the Public Utility Holding Company Act of 1935, subject to Commission's continuing jurisdiction should conditions change materially.

John Dern and Robert L. Foote, of Sidley, Austin,
Burgess & Smith, Donald Richberg, and Richard H. Lauritzen,
for American Natural Gas Company.

Louis E. Clevenger and Jack I. Elias, for the Division
of Corporate Regulation of the Commission.

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This is a proceeding to determine whether American Natural Gas Company ("American Natural"), a registered holding company, may retain its interest in Milwaukee Solvay Coke Company ("Solvay"), a non-utility subsidiary, as an "other business" under Section 11(b)(1) of the Public Utility Holding Company Act of 1935 ("the Act"). 1/

After appropriate notice hearings were held before a hearing officer. American Natural filed a brief in support of the retainability of Solvay. The Division of Corporate Regulation ("the Division") submitted a Recommended Findings and Opinion in which it expressed the view that the divestment of Solvay should be required. 2/ Thereafter, we heard oral argument. On the basis of an independent examination of the record we make the following findings.

1/ Section 11(b)(1) of the Act, insofar as here relevant, provides that the operations of a holding company system be limited "to a single integrated public-utility system," and to:

" . . . such other businesses as are reasonably incidental, or economically necessary or appropriate to the operations of such integrated public utility system: . . ."

The Section further provides:

"The Commission may permit as reasonably incidental, or economically necessary or appropriate to the operations of one or more integrated public utility systems the retention of an interest in any business (other than the business of a public-utility company as such) which the commission shall find necessary or appropriate in the public interest or for the protection of investors or consumers and not detrimental to the proper functioning of such system or systems."

2/ The Public Service Commission of Wisconsin, which appeared at some of the hearings, took no position of record. The City of Milwaukee filed a request to be heard but did not appear.

Description of System and Prior Proceedings

American Natural, which is solely a holding company, has four direct subsidiaries, Michigan Consolidated Gas Company ("Michigan Consolidated"), Milwaukee Gas Light Company ("Milwaukee"), Michigan Wisconsin Pipe Line Company ("Michigan Wisconsin"), and American Natural Gas Service Company. American Natural owns all the common stock of these subsidiaries, except .1% of Milwaukee. American Natural also has one indirect subsidiary, Solvay, all of the common stock of which is owned by Milwaukee, having been acquired in January 1947 from American Light and Traction Company, the predecessor of American Natural. 3/

Michigan Consolidated is a gas utility supplying natural gas in Detroit and a number of other cities in Michigan. Milwaukee, also a gas utility, serves the city of Milwaukee and its environs in Wisconsin. Michigan Wisconsin owns and operates an interstate natural gas pipe line from Texas to Michigan and Wisconsin, and it operates under lease from Michigan Consolidated an underground gas storage reservoir in the vicinity of Austin Field in West Central Michigan. Michigan Wisconsin supplies all the natural gas requirements of Milwaukee and approximately one-half of the requirements of Michigan Consolidated. Solvay is engaged in the production and sale of coke and coal chemicals, in connection with which, as described more fully later, it produces by-product coke oven gas which it sells to Milwaukee for resale.

As of December 31, 1952 the net property accounts of the American Natural system aggregated approximately \$327,051,863 and operating revenues for the year ended that day were \$102,667,813. As of November 30, 1952 net utility plant of Milwaukee was \$45,363,943 and the net plant and equipment of Solvay was \$2,856,751, and the revenues for these companies for the year ended November 30, 1952, were \$20,493,299 and \$11,812,894, respectively.

On December 30, 1947, this Commission approved a plan of simplification and integration filed under Section 11(e) of the Act by American Light and Traction Company and its parent, The United Light and Railways Company. 4/ In approving the plan, the Commission found that, upon completion of the

3/ The United Light and Power Company, et al., Holding Company Act Release No. 7023 (December 2, 1946).

4/ The United Light and Railways Company, et al., Holding Company Act Release No. 7951.

then proposed Michigan Wisconsin pipe line project, Michigan Consolidated and Milwaukee could be retained by American Natural as an integrated gas public utility system and that Michigan Wisconsin and Solvay could be retained as other businesses which were economically necessary or appropriate to the operations of the integrated system. In respect of the retainability of Solvay, however, the Commission stated:

"Milwaukee Solvay is at present closely related to the operations of Milwaukee, supplying 68.23 per cent of Milwaukee's manufactured gas. All of Milwaukee Solvay's production is devoted to Milwaukee, while its by-products are sold through usual trade channels. It is clear that Milwaukee Solvay is now economically necessary and appropriate to the operations of Milwaukee. However, once natural gas is available to Milwaukee, the function of Milwaukee Solvay will be changed. Applicants state that Milwaukee Solvay will then be held in stand-by capacity in case of line failure or inadequate supply during periods of peak demand. In view of the manufacturing capacity of Milwaukee itself, which will also be retained for stand-by, there may be some question whether the production of Milwaukee Solvay will be needed and whether its operations will in time become completely disengaged from those of Milwaukee. For these reasons, while we find Milwaukee Solvay, on the basis of the facts now presented, economically necessary and appropriate to the operations of Milwaukee, we will reserve jurisdiction to reconsider this question if and when it appears that there has been a substantial change in the relationship of Milwaukee Solvay to the operations of Milwaukee." ^{5/}

Position of the Participants

In support of the retention of Solvay, American Natural contends that Solvay is an important and integral part of its system, that Solvay supplies about 10% of the firm gas sold annually by Milwaukee which has now converted to natural gas, that because of limitations of supply the gas obtained from Solvay cannot be replaced with natural gas, that Milwaukee and Solvay have interrelated facilities, and that Solvay provides one-third, and the most readily available and useful portion, of the stand-by facilities which are required by Milwaukee in the event of a break in the natural gas supply line.

^{5/} Id., at p. 29

The Division contends that Solvay is a substantial industrial enterprise the major portion of whose business consists of the production and marketing of coke and coal chemicals having no operating relationship to Milwaukee's utility business, that only a minor part of Solvay's operations are related to Milwaukee and there is no convincing proof that under normal conditions such operations are economically necessary or appropriate to Milwaukee's utility operations, and that Solvay's availability as stand-by reserve is of little significance.

We shall consider in turn the applicable statutory standards, Solvay's relationship to the normal operations of Milwaukee, and the stand-by capacity which Solvay provides.

Applicable Statutory Standards

The "other business" provisions of Section 11(b)(1) of the Act ^{6/} have been construed in the light of the statutory policy to achieve "economy of management and operations" and "the integration and coordination of related operating properties," and require that there be an operating or functional relationship between the operations of the retainable utility system and the non-utility business sought to be retained, and that retention would be in the public interest or for the protection of investors or consumers. ^{7/} The retainable non-utility interests should occupy a clearly subordinate position to the integrated system constituting the primary business of the registered holding company. ^{8/}

Solvay's Relationship to Milwaukee's Normal Operations

The Michigan-Wisconsin pipeline was completed and natural gas received by Milwaukee in November 1949, with the conversion to natural gas being completed in January 1950. In 1949 Milwaukee arranged for the sale of coke oven gas produced by Solvay. It entered into contracts, which run to

^{6/} See note 1, p. 2.

^{7/} Philadelphia Company v. S.E.C., 177 F. 2d 720 (C.A.D.C., 1949); United Gas Improvement Co. v. S.E.C., 138 F. 2d 1010 (C.A. 3, 1943); North American Co. v. S.E.C., 133 F. 2d 148 (C. A. 2, 1943). See also: North American Co. v. S.E.C., 327 U. S. 686 at 697 (1946).

^{8/} Cities Service Company, 15 S.E.C. 962, 976 (1944).

September 1960 and continue thereafter unless terminated, under which it purchases from Solvay and resells to the Sewerage Commission of the City of Milwaukee ("Sewerage Commission") Solvay's normal daily production of coke oven gas in excess of that used by Solvay for underfiring its coke ovens, which surplus gas ranges from 60,000 to 67,000 therms per day. ^{9/} As described more fully below, this surplus gas as well as the coke oven gas used by Solvay for underfiring is available to Milwaukee as a stand-by supply of gas.

Milwaukee is obligated to furnish the Sewerage Commission with its heat requirements up to 70,000 therms per day, supplying coke oven gas at the cost to Milwaukee at Solvay's coke plant. ^{10/} To the extent that Solvay's normal daily release of gas is less than 60,000 therms, Milwaukee supplements it with natural gas at the price of coke oven gas, which is approximately the same as the city gate price of natural gas; but for any natural gas delivered in excess of 60,000 therms per day Milwaukee receives an industrial rate. Since Solvay does not have the requisite transmission and storage facilities for transferring the coke oven gas from the coke plant to the sewerage plant, Milwaukee furnishes such facilities.

Since the conversion to natural gas, Milwaukee has supplies natural gas exclusively to all its customers except Sewerage Commission. ^{11/} The coke gas furnished to the Sewerage Commission is from time to time mixed with a small amount of natural gas or gas produced by Milwaukee from testing operations of certain of its own gas production facilities maintained as stand-by. During the 12 month period ended July 31, 1952, which is typical of Milwaukee's

^{9/} The standard measure of the heat content of various fuels is a British Thermal Unit (Btu.), and a therm is a unit of heat content equivalent to 100,000 Btu. The heat content per cubic foot of coke oven gas produced by Solvay is approximately 500 to 525 Btu., and that of the natural gas distributed by Milwaukee 970 to 983 Btu.

^{10/} Sewerage Commission formerly used coal as fuel, and the cost of the coke oven gas supplied by Solvay to Milwaukee is the equivalent of the average cost per therm of coal to Wisconsin Electric Power Company as shown in its reports to the Public Service Commission of Wisconsin.

^{11/} The supply of natural gas available to Milwaukee is limited by regulatory authority and is insufficient to meet requests for additional service being made of Milwaukee.

operating experience since the conversion to natural gas, Milwaukee's total send-out of gas amounted to 222,551,810 therms. It purchased 199,336,119 therms of natural gas from Michigan-Wisconsin, produced 183,314 therms of gas from test runs of its own stand-by facilities, and purchased 21,591,634 therms of coke oven gas (approximately 10% of its total send-out) from Solvay. All of the manufactured gas, as well as 1,440,743 therms of natural gas, was sold to Sewerage Commission. 12/

Prior to Milwaukee's conversion to natural gas, all of Solvay's production of coke oven gas, of approximately 110,000 therms per day, was sold to Milwaukee. Solvay now uses part of the coke oven gas it produces to underfire its ovens and sells only the surplus to Milwaukee for resale, whereas formerly such underfiring was done with gas produced from facilities which Solvay now maintains as stand-by. While the percentage of Milwaukee's requirements supplied by gas purchased from Solvay dropped from 68% in 1947 to 10% in 1952, the actual decrease in therms supplied daily by Solvay is only from 110,000 to between 60,000 and 67,000, the sharp percentage drop reflecting an almost threefold increase in the gas send-out of Milwaukee. 13/

The following table shows Solvay's revenues for the 12 months ended November 30, 1952, and the 12 months ended April 30, 1947, the latter period being the one considered by the Commission when it approved the plan on December 30, 1947.

	Twelve Months Ended November 30, 1952		Twelve Months Ended April 30, 1947	
Revenues:				
Gas	\$ 780,517 (a)	6.6%	\$1,837,375	20.4%
Coke and Coal				
Chemicals	11,032,377 (b)	93.4%	7,181,897	79.6%
	<u>\$11,812,894</u>	<u>100.0%</u>	<u>\$9,019,273</u>	<u>100.0%</u>
Net Income for				
Common Stock	\$ 390,939	-	\$ 541,819	-

(a) Includes stand-by fee of \$100,000 received from Milwaukee Gas.

(b) Sales adversely affected by the steel strike in the summer of 1952.

12/In addition, Milwaukee sells natural gas to Solvay for industrial use.

13/Milwaukee's gas revenues for the twelve month period ended April 30, 1947, were \$8,733,902, as compared to \$20,493,299 for the twelve months ended November 30, 1952.

The Division, relying on the foregoing figures, stresses the fact that the major portion of Solvay's business consists of the production and marketing of coke and coal chemicals. However, this was so even prior to the Commission's 1947 opinion permitting retention of Solvay. Although Solvay's revenues derived from the sale of gas to Milwaukee has decreased since 1947, as pointed out above, Solvay still does supply Milwaukee with a significant amount of gas. The Division, however, disputes that Solvay is a source of approximately 10% of the firm gas sold annually by Milwaukee. It argues that all of the Solvay gas is sold to the Sewerage Commission on an interruptible basis, and that since such gas may be diverted to other customers only in the event of a failure of the natural gas supply and cannot be used to help satisfy the normal daily firm natural gas demands of the Milwaukee system, Solvay is not a source of supply for any firm gas sold by Milwaukee under normal operating conditions. While American Natural concedes that technically under the contract with the Sewerage Commission Milwaukee is not obligated to supply gas to that agency whenever supplies are not adequate to service Milwaukee's customers, it points out that a reasonable construction of the contract with the Sewerage Commission is that service to the latter may be cut off only in the event of a pipe line break. It also points out that the contract provides that after an interruption in service to the Sewerage Commission for 72 hours, Milwaukee is obligated to furnish gas oil or fuel oil sufficient to operate the sewerage plant or to reimburse that agency for the difference between the price of gas oil or fuel oil and the price of the coke oven gas which would otherwise have been supplied. It argues, and in our opinion correctly, that under these circumstances the economic pressure to supply gas is the same as that existing in the case of a firm customer.

The Division also argues that since Milwaukee sells the coke oven gas to the Sewerage Commission at the cost of such gas at the coke plant and receives no compensation as such for the storage and transmission facilities used in delivering the gas which are a part of Milwaukee's rate base, Milwaukee derives no benefit from the transaction and the retention of Solvay is therefore detrimental to the interest of consumers and to the proper operation of the Milwaukee utility system. We cannot agree with this contention because the availability to Milwaukee under the arrangement with the Sewerage Commission of stand-by reserve in the event of emergencies represents a material benefit to Milwaukee's consumers despite the absence of a profit.

Stand-by Facilities

Milwaukee presently has three sources of stand-by reserve to which it can turn in the event of an emergency-- its own gas production facilities, the Austin Field reservoir, and Solvay.

(1) Milwaukee has its own stand-by capacity of 345,000 therms per day. With the conversion to natural gas, Milwaukee converted its gas plant to the production of high Btu oil gas suitable for mixing with coke oven gas, and oil in storage at the plant will suffice for seven days of operation at a maximum capacity of 169,000 therms. Milwaukee also has liquefied petroleum gas facilities which can furnish 176,000 therms daily for six days with the amount of liquefied petroleum normally maintained in storage.

(2) The Michigan-Wisconsin pipeline, which as has been pointed out runs from Texas to Michigan and Wisconsin, branches near Sandwich, Illinois, southwest of Chicago, with one lateral running into Wisconsin, which serves Milwaukee, and the second lateral running into the Austin field. In the event of difficulty in the pipeline south of Sandwich, gas from the Austin Field, which has a storage capacity of in excess of 300,000,000 therms and a daily deliverability of in excess of 5,000,000 therms, can be pumped back to Milwaukee. 14/ While the Division stresses the magnitude of the Austin field stand-by, it does recognize that this reserve would not be available if a break in the pipeline were to occur on the Wisconsin lateral. We think it clear that such contingency is one for which stand-by may properly be provided.

(3) Solvay, in addition to the coke oven gas it produces, is capable of producing daily approximately 50,000 therms of gas through the operation of its producer plant and its liquefied petroleum underfiring equipment which are no longer used in normal operations but are maintained as stand-by to be used in place of the coke oven gas now used for underfiring. Under Milwaukee's contract with Solvay, the latter is obligated to deliver to Milwaukee an aggregate of 110,000 therms of coke oven gas daily for use during

14/ This technique was employed in July 1951 in the only emergency situation which has thus far arisen, when because of unprecedented floods in the southwest the pipeline was unable for a period of 14 days to deliver gas from the Texas gas field to the junction near Sandwich, Illinois.

emergencies resulting from breakage, accident or failure of the pipeline, and Solvay receives a fee of \$100,000 annually for this stand-by service. Milwaukee can interrupt service to the Sewerage Commission for 72 hours without penalty and, as noted, thereafter must either supply oil or reimburse that agency for the additional costs it incurs in securing its needs elsewhere. No occasion has arisen requiring operations under these emergency provisions of the contracts.

Erwin C. Brenner, vice president in charge of Milwaukee's operations, testified that stand-by facilities are essential to avoid interruption of service in the event of emergencies caused by interruption of natural gas supply, which occur on all pipelines; that the greatest possible danger to Milwaukee is a fire at the compressor station at Sandwich or at the Milwaukee city gate station; and that there are also possibilities of accidents, such as a blow-out of a section of the line, strikes or sabotage. He stated that while a 100% stand-by capacity is ideal, it is not economically practicable and Milwaukee must be satisfied with stand-by which will permit meeting of emergency needs. He further stated that Solvay is Milwaukee's basic stand-by facility and represents nearly ideal stand-by because coke oven gas is eminently suitable for mixing with the gases produced by Milwaukee's own stand-by facilities; that Solvay's gas is available on extremely short notice and in considerable quantities; and the arrangement with Solvay provides stand-by at a very low cost.

Brenner stated that the oil gas and liquefied petroleum gas produced by Milwaukee can be used in burners adjusted for natural gas only if mixed with other appropriate gas, and that while coke oven gas is not the sole gas which can be so used, a mixture with it produces the largest quantity of suitable gas. Brenner also noted that liquefied petroleum gas stand-by facilities are useful only over short periods because supplies could not be replaced as rapidly as they would be used in the event of an emergency during winter months, and that the oil gas facilities are less desirable than the coke oven gas facilities because of the high cost of the necessary oil and the problems involved in obtaining sufficient quantities thereof, as well as technical problems preventing sustained maximum output.

Under the contracts, the release of surplus gas of 60,000 therms is available to Milwaukee upon one hour's notice, and Brenner thought that the switchover could be effected even more quickly. He stated that both Milwaukee and Solvay could get the first of their auxiliary facilities

into operation in about three or four hours and all such facilities in about 10 or 12 hours, and that in the period before the availability of any auxiliary facilities, Milwaukee could supply customers with a mixture of coke oven gas and natural gas from local storage which would have a lower Btu content than natural gas but would be reasonably useable until it could be enriched with liquefied petroleum gas from the auxiliary facilities.

With respect to the stand-by fee of \$100,000, Brenner testified that this payment, which was set by the Wisconsin Public Service Commission as the maximum allowable between affiliated companies, is intended to compensate Solvay for the additional costs it incurs through the maintenance of its auxiliary facilities and for the limitations imposed on its coking operations by the requirement to deliver 60,000 therms of coke oven gas daily. He stated that this fee is less than the annual cost of other equivalent stand-by, and also what Solvay believes is compensatory for its services.

The Division contends that Solvay's emergency production is not a significant factor. In this connection it points out that on the day of Milwaukee's maximum send-out of gas during the 12 months ended July 31, 1952, the availability of Solvay's facilities as stand-by would have resulted in less than one hour's additional requirements for full service to Milwaukee's firm customers. However, the record discloses that during the 12-month period referred to, the combined stand-by of Milwaukee and Solvay would have equalled or exceeded the firm gas send-out on 44 days more than the stand-by of Milwaukee alone would have produced. ^{15/} Brenner testified that on days when Milwaukee's total demand could not be supplied by the combined stand-by, the Solvay stand-by would enable Milwaukee to serve an area and customers approximately one-third greater than could be served without it. In his opinion, the chief value of Solvay's stand-by would become apparent during any period when Milwaukee could not meet its total demand, under which circumstances service is continued only in selected areas the size of which is determined by the amount of available stand-by.

^{15/} These days were not consecutive, and unless supplies would have been replenished the combined facilities could not have been continued at full production for longer than approximately six consecutive days.

The Division points to a statement by Brenner that even if Solvay were independently owned it would probably continue to sell gas to Milwaukee, because Solvay lacks facilities for the storage and transmission of its coke oven gas. However, it was Brenner's view that with a change in the ownership of Solvay, costs to Milwaukee would probably increase and the stand-by arrangement would not be as satisfactory as that now existing. He pointed out that an independent Solvay wishing to maximize its profits would be inclined to discontinue the maintenance of its auxiliary underfiring facilities and use the maximum of coke oven gas for underfiring, that it would then probably offer the remaining available coke oven gas to Milwaukee in amounts which it would not be willing to guarantee and at the best price it could negotiate, that Milwaukee would either have to accept stand-by on these terms or compensate Solvay for maintaining its auxiliary facilities in stand-by and conducting its coking operations in such a way as to keep a minimum of 60,000 therms of coke gas available, that the price of such service might well be considerably in excess of \$100,000, and that Milwaukee would lose a large measure of the flexibility it now possesses in the operation of the stand-by facilities and the control over the amount and quality of the coke oven gas produced. 16/

Conclusions

As stated above, when the Commission permitted Solvay to be retained as economically necessary and appropriate to the operations of Milwaukee, jurisdiction was reserved to reconsider the question in the light of the then undetermined consequences of the introduction of natural gas, which the Commission thought might even result in the complete disengagement of the operations of those companies. As appears from the foregoing this situation has not materialized. While no longer occupying the role of Milwaukee's major gas supplier, Solvay still furnishes a substantial amount of gas

16/ Brenner testified that if Solvay's facilities were not available as stand-by, Milwaukee's stand-by capacity would have to be increased, and he anticipated that serious consideration would have to be given to adding to Milwaukee's liquefied petroleum gas storage facilities or developing another source of stand-by gas. It was estimated that such storage facilities would cost about \$1,100,000 and involve annual fixed charges of \$184,000 and wage costs of \$70,824 per year for a maintenance crew.

to that company and provides a source of stand-by reserve which could in the event of a break on the Wisconsin lateral of the pipe line be of great importance. Although Solvay's revenues from coke and chemicals have increased substantially while those from gas have decreased, we are of the opinion that the industrial character of Solvay under present conditions has not reached such proportions that divestment is required. Under these circumstances we find no basis for modifying the Commission's earlier conclusions and requiring divestment of Solvay. If, however, conditions should change materially, we have continuing jurisdiction over the American Natural System under Section 11(b)(1) to take such action as may be appropriate under the circumstances.

By the Commission (Chairman Dammler and Commissioners Rowen, Adams, Armstrong, and Goodwin).

/s/ Orval L. DuBois

Orval L. DuBois
Secretary

AS

General Objections

Although the investigation does not reveal whether CSXT or its predecessors (collectively "the Railroad") transported materials to a business located at 311 East Green Avenue, Milwaukee, Milwaukee County, Wisconsin, such transportation would have been pursuant to federal common carrier rules for the provision of routine rail transportation services for third parties. CERCLA expressly shields common carriers from liability for such shipments. Section 107(a)(4) provides that a transporter is not liable if it did not select the Site; by definition, the shipper, and not the railroad, selects the destination for common carrier rail shipments, and the common carrier is obliged by federal law to provide that service.

In addition, the third party defense for liability is available to a common carrier notwithstanding a contractual relationship between the common carrier and the shipper when "the sole contractual arrangement arises from a published tariff and acceptance for carriage by a common carrier by rail." Section 107(b)(3). Accordingly, for any such shipments, the Railroad would not be liable.

ANSWERS

The following individuals were consulted in the preparation of these answers.

Tony Tuchek, VP Region- North
Scott Gordon, Director Hazardous Materials
Jim Marks, AVP General Claims, Risk Management
H.R. Elliott, General Manager Environmental Hazardous Materials Systems
Carl Gerhardstein, Senior Director-Environment
Kim Vaughn, Manager Environmental Projects
Paul Kurzanski, Environmental Specialist
Kathy Wilson, Assistant Vice President Load Engineering and Design Services
Ray Wilkins, Director Accounts Payable
Steve P. Smith, General Manager customer Accounting
Fritz Horn, Senior Procurement Manager
Kevin Hurley, - CSX RPI - Director Real Estate Services
Karen Mohler, Director Real Estate Engineering
Romano De Simone, Director Chemical Safety
Brock Lucas, Director Dispatching & Net Performance

If you need further information regarding these questions please contact Jeffrey W. Styron, Counsel, CSX Transportation, Inc., 500 Water Street J-150, Jacksonville, FL 32202; 904-366-4058.

1. Did you ever use, purchase, store, treat, dispose, transport or otherwise handle any materials, including hazardous substances, at the Site? If the answer to the preceding question is anything but an unqualified "no", identify: **No.**

- a) the chemical composition, characteristics, physical state (e.g., solid, liquid) of each material;
- b) who supplied you with such material;

- c) how such materials were used, purchased, generated, stored, treated, transported, disposed of or otherwise handled by you;
- d) when such materials were used, purchased, generated, stored, treated, transported, disposed of or otherwise handled by you;
- e) where such materials were used, purchased, generated, stored, treated, transported, disposed of or otherwise handles by you;
- f) the quantity of such materials used, purchased, generated, stored, tr4eated, transported, disposed of or otherwise handled by you.

2. State the dates during which you owned, operated, or leased the Site and provide copies of all documents evidencing or relating to such ownership, operation, or lease arrangement (e. g., deeds, leases, etc.).

Pere Marquette Railway Co. ("PMRC") appears to have bought portions of this Site from June 13, 1903 to February 10, 1944 as follows:

- On June 13, 1903 PMRC bought parcels of land from Henry Newcombe of Boston, MA that appear to be part of the Site in question (4 pages);
- On October 26, 1936 the Milwaukee Electric Railway and Light Co. conveyed a portion of the Site to the PMRC (3 pages);
- On October 29, 1936 the City of Milwaukee conveyed a portion of the Site to the PMRC (5 pages);
- On February 10, 1944 a portion of lots one and two of the Site were conveyed to PMRC by Walter A. Zinn and Toni Zinn (his wife). Copies of a proposed Agreement, proposed Lease and two letters dated December 31, 1943 and January 3, 1944 are enclosed for your perusal (9 pages); and
- A Quit Claim Deed wherein the City of Milwaukee conveyed part of the Site to the Chesapeake and Ohio Railway Co. on July 1, 1948 (5 pages). *All the above attached as exhibit 1.*

The PMRC leased a portion of the site to the flowing entity:

- C. J. Meyer doing business as Forelle Fish Company (2 pages), *Enclosed as Exhibit No. 2*

It appears that over the time period of September 24 through 27th of 1968 the railroad that owned the property mentioned above, then known as the Chesapeake and Ohio Railway Co. ("C&O"), conveyed their property located south of the Chicago and Northwestern rail corridor to Pickands Mather & Co. At the same time, Pickands Mather & Co. conveyed their property located North of the Chicago and Northwestern rail corridor to the C&O, as evidenced by the following deeds:

- C& O to Pickands Mather Co., deed dated September 24, 1968, (4 pages) and
- Pickands Mather Co. to the C&O, deed dated September 27, 1968, (4 pages). *Enclosed as exhibit 3.*

The C&O Railway had the following leases affecting the property to the north of the Chicago and Northwestern rail corridor and north of the Site:

- **O'Connell Distribution Co., Inc., 2 leases**
 - Lease dated April 15, 1974 (5 pages, including map);and
 - Lease dated May 15, 1975 (5 pages, including map).
- **Janke Industrial Marine Corp. June 20, 1973 (5 pages, including map). *Enclosed as exhibit 4.***

The C&O conveyed the interest in their property to Chessie Resources, Inc. on February 21, 1975 (7 pages including map). My understanding is this property is located North of the Site in question, please refer to map enclosed with deed. *Enclosed as exhibit 5.*

Chessie Resources, Inc. in turn, deeded the above referenced property to the City of Milwaukee on December 19, 1980, (4 pages including map). *Enclosed as exhibit 6.*

3. Identify all persons having knowledge or information about the generation, transportation, treatment, disposal, or other handling of hazardous substances by you, your contractors, lessors, or by prior owners or operators at the Site. **None known.**

4. Identify the prior owners of the Site. For each prior owner, further identify: **See response to question No. 2 above.**

- a) the dates of ownership;
- b) all evidence showing that they controlled access to the Site; and,
- c) all evidence that a hazardous substance, pollutant, or contaminant, was released or threatened to be released at the Site during the period that they owned the Site.

5. Identify the prior operators, including lessors, of the Site.

- **To C. J. Meyer doing business as Forelle Fish Company (2 pages), *Enclosed as Exhibit No. 2***

The C&O had the following leases affecting property to the north of the Chicago and Northwestern Railroad corridor and north of the Site:

- **O'Connell Distribution Co., Inc., 2 leases**
 - Lease dated April 15, 1974 (5 pages, including map);and
 - Lease dated May 15, 1975 (5 pages, including map).
- **Janke Industrial Marine Corp. June 20, 1973 (5 pages, including map). *Enclosed as exhibit 4.***

For each operator, further identify:

- a) the dates of operation; **Please see above referenced documents.**
- b) the nature of prior operations at the Site; **Unknown.**
- c) all evidence that they controlled access to the Site; **Unknown.**
- d) all evidence that a hazardous substance, pollutant, or contaminant was released or threatened to be released at or from the Site and/or its solid waste units during the period that they were operating the Site. **Unknown.**


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CSX: About Us: Company Information: Chronology

October 11, 2002

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- Nov. 14, 1978** CSX Corporation was incorporated in the Commonwealth of Virginia, for purposes of a merger of Seaboard Coast Line Industries Inc., headquartered in Jacksonville, Fla.; and Chessie System Inc., headquartered in Cleveland, Ohio. One of the criteria which led to the selection of Richmond was the historic association with both Chessie and Seaboard. The Chesapeake and Ohio Railway Company, part of the Chessie System Railroads, traced its corporate ancestry to the Louisa Railroad Company which was chartered in Richmond in 1836, and the C&O had its headquarters in that city for many years. One of Seaboard's earliest predecessors was the Richmond and Petersburg, which was chartered in 1836 to run between those two cities. A predecessor of Seaboard Coast Line Railroad had general offices in Richmond since 1958.
- Jan. 18, 1979** Seaboard Coast Line Industries Inc. and Chessie System Inc. filed a joint application with the Interstate Commerce Commission asking for approval of the proposed merger of the two holding companies. Shareholders approved the merger at separate special stockholders' meetings on Feb. 13.
- Nov. 1, 1980** Effective date of merger of Seaboard Coast Line Industries and Chessie System Inc. into CSX Corporation.
- Prime F. Osborn named chairman and co-CEO;
 - Hays T. Watkins named president and co-CEO
 - Due to this merger, certain non-rail assets became part of the new CSX Corporation.
 - From the Seaboard side: Cybernetics & Systems Inc., Florida Publishing Company, Clay Video and Area Communications.
 - From the Chessie side: Chessie Resources Inc., The New River Company, The Greenbrier and Beckett Aviation Corporation.
- December 1981** CMX Trucking formed.
- May 1, 1982**
- Prime Osborn retired;
 - Hays Watkins named chairman and CEO;
 - Paul Funkhouser named president
- Aug. 16, 1982** Florida Publishing, Clay Video and Area Communications put up for sale.
- Dec. 3, 1982** Sold Area Communications to Demetree.
- June 7, 1983** Merger of Texas Gas Resources Corporation and CSX approved by respective boards. With this merger, CSX would also acquire American Commercial Lines.
- June 10, 1983** ACL put in voting trust pending approval of CSX's control by ICC.
- July 1, 1983** Sold ferry to Michigan-Wisconsin Transportation Co.
- Aug. 6, 1983** Acquired 72 percent of TXG.
- Sept. 30, 1983** Texas Gas (TXG) merger completed.
- Oct. 28, 1983** CSX stock split 3-for-1. (10/25/83 \$75.25 close; 10/28/83 \$25.0833).

Sept. 7, 1984	ACL merger approved by ICC.
Dec. 7, 1984	CSX listed on London Stock Exchange.
Jan. 24, 1985	Letter of intent to sell Beckett Aviation to Aero Services.
Aug. 30, 1985	Sale of Beckett Aviation to Aero completed.
Dec. 11, 1985	Announced realignment into four major areas: transportation, energy, technology and properties.
Dec. 16, 1985	John T. Collinson named vice chairman.
Jan. 9, 1986	Signed letters of intent to purchase Rockresorts from Laurance S. Rockefeller.
Feb. 4, 1986	Purchased 30 percent interest in Yukon Pacific Corporation.
April 10, 1986	Rockresorts purchase completed.
April 21, 1986	Announced proposal to acquire Sea-Land.
Dec. 2, 1986	Board approved B&O merger into C&O.
Dec. 31, 1986	Sold CSX Minerals to Quintana Minerals Corp. Sold New River Company to Quintana Minerals Corp.
Feb. 11, 1987	Sea-Land merger approved by ICC.
April 30, 1987	B&O merged into C&O.
July 20, 1987	Announced formation of CSX/Sea-Land Intermodal and Logistics.
Sept. 2, 1987	C&O merged into CSX Transportation Inc.
April 20, 1988	John Snow elected president & COO.
April 27, 1988	CSX Oil & Gas sold to Total Minatome.
July 12, 1988	Acquired majority interest in Yukon Pacific.
Sept. 19, 1988	CSX announced restructuring program; TXG and resort properties put up for sale.
Oct. 18, 1988	Self-tender Dutch auction completed, CSX buys 43,129,902 shares at \$32 per share.
Nov. 11, 1988	CSX/Sea-Land Intermodal announced restructuring.
Dec. 20, 1988	Signed agreement to sell Rockresorts to VMS Realty Partners.
Dec. 23, 1988	Signed definitive agreement to sell Texas Gas Transmission to Transco Energy Company.
April 20, 1989	John W. Snow elected CEO.
July 11, 1989	Completed sale of Rockresorts to VMS. CSX retained management of Grand Teton Lodge and Carambola Beach Resort.
March 8,	Sale of CSX Energy to Enron Corp.

1990

Sept. 14, 1990 Virginia Retirement System and CSX jointly announced RF&P proposal.

Jan. 31, 1991 Hays T. Watkins retired.

Feb. 1, 1991 John W. Snow named chairman.

June 27, 1991 CSX announced agreement to sell one-third interest of Sea-Land Orient Terminals Ltd. (a Sea-Land Hong Kong terminal) to Ready City Ltd.

July 1, 1991 CSX Transportation combined three-unit rail structure into one.

July 29, 1991 ACL agreed in principle to acquire Hines Inc.

Sept. 12, 1991 Sea-Land and the Soviet Railways announce partnership to utilize Trans-Siberian Railway.

Sept. 30, 1991 Sea-Land announced organizational moves.

Oct. 9, 1991 CSX raised dividend to 38 cents.

Oct. 10, 1991 RF&P transaction consummated.

Oct. 17, 1991 Barnett Banks agreed in principle to acquire CSX Commercial Services.

Feb. 14, 1992 CSXT entered into negotiations to purchase P&LE's railroad business.

April 23, 1992 Encompass - joint venture between AMR and CSX.

May 22, 1992 Valley Line sold to ACL and assets placed in voting trust.

June 12, 1992 ICC approved ACL's acquisition of Valley Line.

June 23, 1992 Valley Line assets transferred from voting trust to ACL.

Aug. 6, 1992 Announced CSX/Sea-Land Logistics restructuring and new name of CSX Logistics.

Sept. 14, 1992 Three Rivers Railway, a subsidiary of CSXT, purchased remaining rail lines of P&LE (60 miles), already owned the other 50 percent.

Feb. 8, 1993 Acquisition of CTI (held an interest since 1988).

June 1993 Sea-Land applied to reflag 13 U.S.-flag ships.

Oct. 13, 1993 CSX raised dividend to 44 cents.

Feb. 14, 1995 Sea-Land received MARAD approval to reflag five U.S. flag vessels under foreign registry of the Marshall Islands.

Feb. 21, 1995 Jeff B. Lowenfels named president and CEO of Yukon Pacific Corp.

Oct. 11, 1995 CSX raised dividend to 52 cents and announced 2-for-1 stock split.

Dec. 4, 1995 Effective date of stock split.

July 4, 1996 Netherlands Railway, Deutsche Bahn AG and CSX announce plans for joint venture - NDX.

Oct. 15, 1996	CSX and Conrail announce strategic merger.
April 8, 1997	CSX and NS agree on division of Conrail.
Nov. 4, 1997	John Andrews named Chief Information Officer of CSX.
Nov. 6, 1997	Les Passa named president and CEO of CSX Intermodal.
Jan. 19, 1998	CSX unveils Direct Stock Purchase Plan.
March 26, 1998	Sanga and CSX Technology announce intent to form a joint venture company to be exclusive channel for Sanga and CSX's SCM Java Products.
June 16, 1998	Charles J.O. Wodehouse appointed president of CSX Technology after Andrews resigns.
June 30, 1998	Completed ACL transaction with Vectura; own 34 percent.
Aug. 6, 1998	Terminated joint venture with Sanga.
Oct. 1, 1998	CSX Integrated Services becomes BridgePoint.
Feb. 1999	CSX and Vail Resorts entered into a contract for Grand Teton Lodge Company.
March 16, 1999	Announced Sea-Land to be managed as three distinct businesses- global container shipping (John P. Clancey), international terminal operations (Robert J. Grassi), and domestic trade (Charles G. Raymond).
March 31, 1999	CSXT and UP reach historic interchange agreement directing traffic through major gateways connecting the two railroads.
June 1999	Vail's acquisition of Grand Teton Lodge Company completed.
June 1, 1999	CSX begins operating new rail network to include Conrail.
July 14, 1999	Alvin R. (Pete) Carpenter named vice chairman of CSX.
July 14, 1999	Ronald J. Conway named president of CSXT.
July 22, 1999	Reached agreement to sell Sea-Land's international liner business and related assets to A.P. Moller-Maersk Line for \$800 million.
Nov. 16, 1999	CSX announces CSX Lines (domestic container-shipping). Charles G. Raymond, president and CEO.
Dec. 10, 1999	CSX completes Maersk/Sea-Land transaction.
Dec. 15, 1999	CSX launches CSX World Terminals. Robert J. Grassi, president and CEO.
April 11, 2000	John W. Snow becomes acting president of CSXT.
Sept. 22, 2000	Sale of CTI Logistx to TNT Post Group, N.V.
Nov. 29, 2000	Michael J. Ward named president of CSX Transportation Inc.
Feb. 15, 2001	CSX Vice Chairman Alvin R. (Pete) Carpenter retires.

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corrected July 16, 1946

CONDENSED SUMMARY OF PLANT HISTORY

(1) OVENS

Blk. #1 Solvay ovens operated 1906 to 1920. Koppers ovens 1921 to-date.
Blk. #2 Solvay ovens operated 1906 to 1921. Koppers ovens 1922 to present date.
Blk. #3 Solvay ovens operated since 1904.
Blk. #4 Solvay ovens operated since 1904.

(2) COAL HANDLING

Dock Rig #1 built in 1903; remodeled 1906; electrified 1930.
" " #2 " " 1907; electrified 1910.
" " #3 " " 1903; remodeled 1906; electrified 1937.
Coal Bridge built in 1906; automatic clamps 1926.
Breaker Building built in 1907; rebuilt 1910; machinery 1907.
Pulverizer Building built in 1907; rebuilt 1910; machinery 1907.
Conveyors "A" & "B" built in 1906; rebuilt 1926.
"C" & "D" Conveyors built in 1906; rebuilt 1922.
"J1" & "J2" " " 1906; rebuilt 1921.
"M" & "N" Conveyors " " 1906.
"R" & "S" " " 1921.

(3) BY PRODUCTS (GAS)

- (a) By Product Building built in 1904; rebuilt in 1906; equipment 1904 and 1906; replaced 1921, 1929 and 1930.
- (b) North Condenser Gas Bldg. erected in 1904; lean-to 1910; rebuilt 1915. Apparatus built in 1904.
- (c) South Condenser Gas Bldg. erected in 1906; extended in 1909; rebuilt 1915. Apparatus installed - 50% 1906, 50% 1909.
- (d) Fuel Gas Holder built in 1910; reroofed 1937.

(4) BY PRODUCT (TAR)

- (a) 500,000 Gal. Tar Tank installed in 1909; pumps 1904; Cottrell precipitator 1929.

(5) BY PRODUCT (AMMONIA)

- (a) Building erected in 1904; rebuilt 1916; apparatus built in 1904, 1906 and 1913. Aluminum washers and partial coolers 1925 and 1926.

(6) BY PRODUCT (LIGHT OIL)

- (a) Present benzol scrubber Bldg. erected 1910; south scrubbers installed 1916; Koppers scrubbers installed 1926. All wash oil heaters, coolers and column installed 1924 after fire of 1923.

(7) BY PRODUCT (BENZOL)

- (a) Present L.O. Bldg. and Tank House constructed 1924. Equipment erected 1924 following 1923 fire.
- (b) Loading station erected 1924.

(8) COKE HANDLING

- (a) Foundry screening structures and equipment 1930; double sizing 1941.
- (b) Crushers, crusher buildings and conveyors erected 1931.
- (c) Domestic screen bldg. built 1904; apparatus rebuilt 1926; east driveway loading equipment 1928.
- (d) Breeze elevator and conveyor 1913; box car loader 1910.

(9) STEAM PRODUCTION

- (a) Oven Boilers Blk. #3 and 4 built 1904.
- (b) Main Boiler House, structure 1917 and 1921; boilers 1917 and 1921.

(10) ELECTRIC LIGHT & POWER

- (a) Main Power House structure 1904; rebuilt 1916.
- (b) Power House Annex " 1903.
- (c) Generators as follows:

200 K.W. units #1, 2 and 3 -	1904;
300 " unit #4	1906;
600 " " #5	1909;
600 " " #6	1914;
1000 " M.G. Unit	1928;
Transformer Bldg. & transformers 1928.	

(11) WATER SUPPLY

- (a) W.P. Bldg. structure built 1904; rebuilt 1916.
- (b) Water treatment apparatus 1904.
- (c) Mill Water Pumps and dock tunnel 1917.
- (d) Dock screens and intake bldg. 1926.
- (e) Feed Water Pumps and heaters 1916.
- (f) City Fire hydrant system 1906.
- (g) Fire boat fire hydrant system 1930.

(12) OFFICE BLDGS & UTILITY BLDGS.

- (a) Engineering and Lab. office 1911.
- (b) Front office 1913.
- (c) Shift foreman's office 1909.
- (d) Machine Shop 1907.
- (e) Plant fence 1917.

(13) ROLLING STOCK

- (a) #3 Steam Locomotive 1917; #104 Diesel Elec. 1936 and #105 Diesel Elec. 1937.
- (b) Locomotive crane #1 purchased 1917; crane #2 purchased 1908; crane #3 purchased 1920; crane #4, second hand, 1929.
- (c) Six 50 ton steel Gondola Cars 1904; 6 - 50 ton steel gondola cars 1929; 2 wood flat bottom gondolas and 1 wood flat car 1917.

(14) PRODUCER PLANT

- (a) Producer Plant construction buildings and equipment 1929.

B7

Early History

Feb. 1946	Time office started paying every two weeks.
Jan. 11, 1949	Lake freight on coal increased
July 5, 1949	Discontinued shipments of coke to Inland Steel
Sept. 1949	Started shipping coke to Carnegie Steel Co.
Nov. 7, 1949	Started producing foundry coke in Koppers Batt. #1
Nov. 15, 1949	Started sending coke oven gas to Sewage Plant
Dec. 5, 1949	Coal miners started a 3-day instead of a 5-day work week
Jan. 7, 1950	Milwaukee completely changed over to natural gas
Mar. 1, 1950	Started shipping 100 tons per day to Interlake Iron
Mar. 30, 1950	Explosion at Sewage Plant drier
Apr. 1, 1950	Started shipments of coke to Youngstown Sheet & Tube Co.
Apr. 17, 1950	Started using new Blast Furnace screen
Apr. 20, 1950	Started shipping all of Blk. 2 coke as furnace coke
May 10, 1950	Cut in new Butane vaporizer
Sept. 6, 1950	Started using small spray of water end of foundry boom loader
Sept. 6, 1950	Shut down producer plant for holder repairs
Nov. 20, 1950	First use of butane in surplus gas for cold enrichment
Nov. 22, 1950	Discontinued use of lime in ammonia plant
Dec. 5, 1950	B.H. liquor bypassing A.C. direct to settling tank
Dec. 7, 1950	Traffic badly snarled account of 7-inch snowfall
Dec. 14, 1950	Started heating Solvay ovens with natural gas.
Dec. 15, 1950	Haul foundry coke by truck if necessary account Ry. Switchman's strike
Dec. 23, 1950	Shipment of first car of #3 foundry coke
Dec. 26, 1950	No anthracite in foundry coke for 48 hours account delay in shipments
Dec. 26, 1950	Fires started in producer plant after holder repairs
Dec. 27, 1950	Temperature fell to 11 below zero

- 1909-10 - Started #5 Turbine
- 1914 - " #6 "
- April 1904 - Started Batteries #3 and #4
- April 1906 - Started Batteries #1 and #2
- Aug. 24, 1921 - Started Koppers Battery #1
- Apr. 20, 1922 - Started Koppers Battery #2
- Nov. 21, 1920 - Shut down Solvay Battery #1 for demolition
- July 31, 1921 - Shut down Solvay Battery #2 for demolition
- 1922 - Completed new Boiler House
- Jan. 2, 1929 - Started buying purchased power
- Oct. 24, 1931 - Started double crushing domestic coke with new crusher
- Oct. 29, 1931 - Started using the first brick wharf
- June 1, 1931 - Stopped paying time and one-half for overtime (10% wage cut May 1, 1932)
- June 7, 1929 - Started using calcium chloride for dustless coke
- Nov. 22, 1930 - Loaded first box car on the Ottumwa loader
- Jan. 1928 - Mayville stopped taking furnace coke. No furnace coke was shipped from then until after 1940.
- June 3, 1929 - Started the Producer Plant 2:00 P.M.
- May 30, 1930 - Started putting breeze in foundry coke mixture
- Dec. 18, 1929 - 8:15 A.M. Started using producer gas in Blks. #3 and #4
- Oct. 5, 1929 - 5:15 P.M. - Cottrell tar extractor started operation. *on oven gas*
- June 4, 1925 - ^{First} A.W. column for #2 A.C. installed. Cost \$5,076 plus \$300 credit for scrap plus \$795 for new patterns
- Oct. 23, 1911 - Laboratory moved into new building

Sept. 2, 1921 - Solvay Battery #2 was shut down cold and remained down until Oct. 15, 1922.

- May 17, 1939 - Started putting bunker oil on coal to ovens *7 day max*
- Dec. 11, 1929 - Started using drag conveyor for unloading stock coke
- Mar. 29, 1928 - Changed from tar to liquor circulation in Blk. #1 and #2 hydraulic mains
- Nov. 5, 1927 - Completed cast iron jambs for Battery #1. (Battery #2 were cast iron when installed)
- Oct. 1934 to - Changed the banana bricks in Battery #2. Battery #1 was finished
- Jan. 1935 Jan. 11, 1936. This work was done during fall and winter months.
- Oct. 26, 1937 - Started using the addition to the domestic wharf. (This brings the wharf up to the drag conveyor)
- Oct. 28, 1937 - Abandoned the use of lime in the A.C. (Ran several weeks in September without lime for test)
- 7 - Nov. 20, 1937 - Shut down the A.C.
- Aug. 1, 1938 - Started the A.C.-free NH₃ only. Liquor out of the sewer 10 A.M.
- Oct. 9, 1940-10:15 A.M. Started to recover fixed ammonia
- June 30, 1923 - Finished retubing #7 and 8 Solvay boilers
- Jan. 1, 1937 - #104 Diesel locomotive put in use
- Oct. 6, 1937 - #105 Diesel locomotive put in use
- May 13, 1940 - Started unloading boats without a slab picker at "B" belt
- Year 1939 - Coal boats averaged 27.5 tons of coal for fuel for 24 hours. Engineer of Str. Kinney. (6/16/41 3% of cargo - Lovett)
- Feb. 2 to Feb. 10, 1922 - Koppers Co. ran test on Battery #1. 80 ovens per day, 11.69 tons per oven
- July 3, 1942 - Main drum shaft of #3 dock rig broke. OK July 15.
- July 1, 1942 - Shut down Producer plant for cleaning
- Aug. 12, 1942 - Made a complete blackout test of the coke plant

- Sept. 1, 1942 - Started hauling tar to Carrollville by truck
- Mar. 31, 1941 - Started new foundry screening plant
- Feb. 26, 1942 - Mr. Mackie died
- Mar. 23, 1942 - Changed name of The Milwaukee Coke & Gas Co. to Milwaukee Solvay Coke Co.
- Aprl. 8, 1942 - Refined one car of Light Oil for St. Paul Coke Plant (only one)
- Nov. 1, 1939 - Installed double magnet screen for west side breeze
- Dec. 29, 1939 - Installed double magnet screen for east side breeze
- Feb. 11, 1940 - Installed carbon blowers on Koppers pushers
- 1921 - Only 7 batteries of triangular flues were constructed - 1 at Sidney; 1 at Camden; 2 at Chicago; 2 at Milwaukee and 1 at Jones & Laughlin
- Dec. 18, 1940 - Replaced foundry grizzly with Gyrex shaker screen $3\frac{1}{2}$ "
- Feb. 11, 1944 - Explosion in the sewers due to pyridine and leak in the main
- Mar. 8, 1944 - Started using anthrafine
- June 3, 1944 - Boiler feed water line failed causing serious damage to boilers. Coke plant down 5:22 A.M. to 2:17 P.M.
- July 1944 - Rebuilt Blk. #4 off-heat flue
- Dec. 15, 1942 - Started natural gasoline plant
- Dec. 8, 1943 - Started using new tile line from A.C. to #2 stack
- Dec. 14, 1943 - Started Cottrells on producer gas
- Oct. 22-23, 1946 - Threw back ^{backed} 1485 tons of mud from the face of the dock
- Dec. 12, 1945 - Ray Karnes moved to the coke plant office.
- May 10, 1946 - Sentinel man took pictures of the coal field nearly empty

- ✓ Mar. 8, 1946 - Heavy snow storm caused one of Milwaukee's worst traffic jams. 3 - 9 P.M.
- July 3, 1945 - Finished special repairs to Solvay ovens after 2½ years digging out, and air boxes, etc.
- ✓ May 1, 1949 - Mr. Kreuz came to the company as Vice-President and General Manager
- ✓ June 1, 1949 - Maximum weekly compensation wage increased from \$40 to \$46.50 and compensation from \$28 to \$32.55. This is 70% of wages.
- P.M. Co. coke commission is 5% less 3/4% or 4¼% except on furnace coke 5¢ per ton less 3/4¢ or 4¼¢ per ton
- ✓ Sept. 26, 1949 - First natural gas entered Milwaukee homes.
- ✓ Jan. 7, 1950 - 7 A.M. Milwaukee entirely on natural gas
- ✓ Jan. 18, 1949 - Mr. Ludberg, Koppers inspector, finished inspection
- ✓ Jan. 28, 1949 - Resumed shipping tar in tank cars. Trucks had been used since Apr. 7, 1948
- ✓ Feb. 16, 1949 - Ed. Weinheimer and Tom Noble were here to see about relining 3 Solvay ovens
- ✓ Mar. 17, 1949 - Mr. Chamberlain and Mr. Kreuz visited the plant
- ✓ Dec. 11, 1947 - Started Robins car shaker
- ✓ Oct. 1947 - C.J. Koenig finished painting bridge- \$10,148.40
- ✓ Jan. 18, 1947 - 18" snowfall and blizzard paralyzed Milwaukee's traffic for several days.
- ✓ Mar. 14, 1947 - J.A.B. Lovett elected Executive Vice-Pres. of the Gas Co.
- ✓ Apr. 28, 1947 - Gillen Co. finished removing 4 scows of mud from our dock and channel
- ✓ Oct. 8, 1947 - Connected up new overhead gas line to the Barclay Street main
- May 22, 1946 - Finished installing the emergency boiler feed pump

Dec. 1949 ~~Started to make Thrifty Nut coke - single screens~~ - Heavy wash - 1st-1091 tons

Nov. 9, 1950 ~~Plan to make Thrifty Nut for one or two days, commencing Nov. 9, 1950. To pass thru 1 3/16 and over 5/8 x 4. Fines to be boiler fuel.~~

May 1, 1949 - Mr. Krebs came to the company as Vice-President and General Manager

June 1, 1949 - Maximum weekly compensation was increased from \$40 to \$45.00 and compensation from \$28 to \$32.52. This is 10% of wages.

P.M. 60. coke commission is 2% less 3/16 or 1/2 except on furnace coke 2% per ton less 3/16 or 1/2 per ton

Sept. 30, 1949 - First natural gas entered Milwaukee homes.

Jan. 7, 1950 - 7 A.M. Milwaukee entirely on natural gas

Jan. 18, 1949 - Mr. Ludberg, Koppers Inspector, finished inspection

Jan. 28, 1949 - Resumed shipping bar in tank cars. Trucks had been used since Apr. 7, 1948

Feb. 16, 1949 - Ed. Weinheimer and Tom Noble were here to see about relining 3 Solway ovens

Mar. 17, 1949 - Mr. Chamberlain and Mr. Krebs visited the plant

Dec. 11, 1947 - Scrapped Rohrer 9-ton shaker

Oct. 1947 - C.L. Koenig finished painting bridge - \$10,148.10

Jan. 18, 1947 - 18" snowfall and blizzard paralyzed Milwaukee's traffic for several days.

Mar. 14, 1947 - J.A.R. Lovett elected Executive Vice-President of the Gas Co.

Apr. 28, 1947 - Giller Co. finished removing 11 acres of mud from our dock and channel

Oct. 8, 1947 - Connected up new overhead gas line to the Markey Street main

May 22, 1946 - Finished installing the emergency boiler feed pump

LOG BOOK NOTES

- Feb. 1946 In February 1946 the time office started paying every two weeks.
- May 5, 1949 Discontinued shipments of coke to the Inland Steel Co. This ended contracts under which coke had been shipped since July 27, 1947. Except for a few periods shipments were made daily. From September 23, 1947 until December 15, 1947, 720 tons per day were shipped.
- Sept. 1949

Sept. 12-15	4 days	750	tons	per	day	to	Carnegie	Steel	Co.
" 26-29	4	" 1000	"	"	"	"	"	"	"
" 30-Oct. 4	4	" 500	"	"	"	"	"	"	"
" 4		300	"	"	"	"	"	"	"
- Nov. 15, 1949 Started sending coke oven gas to the Sewage Plant
- Nov. 7, 1949 Started producing foundry coke in Koppers battery #1
- Dec. 5, 1949 Coal miners started a 3-day instead of a 5-day work week.
- Jan. 7, 1950 7 A.M. The City of Milwaukee was completely changed over to natural gas.
- Mar. 1, 1950 Started shipping 100 tons per day to Interlake Iron Co.
- Mar. 30, 1950 A.M. Explosion at Sewage Plant drier.
- Apr. 1, 1950 Started shipments of coke to the Youngstown Sheet & Tube Co. 500 tons per day at \$16.50. The price was increased to \$16.85 on August 28, 1950. Shipments are to continue at this price until June 30, 1951. For a time all coke from battery #2 was shipped to this company which was more than 500 tons. Later the amount was reduced to 500 tons and the balance sold to the Inland Steel Co.
- Apr. 17, 1950 4 P.M. Started using the new blast furnace screen (1" x 1").
- May 10, 1950 3:15 P.M. Cut in the new butane vaporizer.
- Apr. 20, 1950 4 P.M. Started shipping all of Blk. 2 coke out as furnace coke.
- June 1950 E.F.B. moved over to the main office
- July 17, 1950 Outside plant telephone was out of service from 1:30 A.M. to 8:30 A.M.--about 7 hours--early Monday morning because of heavy rain fall causing trouble. There was no interference with incoming calls or calls within the plant.
- Aug. 27, 1950 12:30 A.M. The limit switch on pusher #1 failed and the pusher shoe struck the bull gear breaking it off. The operator failed to notice this or did not take precautions and went ahead pushing the next oven. Because of the missing shoe, the ram head caught the sill block and became fouled. During the half hour before the ram could be gotten loose it got red-hot, but apparently any deflection due to excess heat was not noticeable.
- Sept. 6, 1950 Started using a small spray of water at the end of the foundry boom loader to prevent hot pieces of coke setting the cars on fire.
- Oct. 24, 1950 Installed new hopper below furnace coke screen and placed 2 air vibrators on the chute.

Nov. 1950

Mr. E.W. Kuhlman, an auditor for Arthur Anderson Co. was here to inspect the ovens in connection with repair work to the end flues and mains. Mr. Dorr and Mr. Karnes had made arrangements for 4 or 5 foundries to haul foundry coke but the strike was called off late Friday night and therefore no trucks were loaded with coke, although one driver came but was sent away without the coke.

Dec. 25, 1950

In the afternoon a light snow started and continued until the following day until 8" had fallen, but no serious delays were occasioned.

Dec. 26, 1950

Because of the delay in anthracite shipments, foundry coke for 48 hours, commencing at midnight Dec. 26, contained none of this material.

Dec. 26, 1950

Fires were started in the producer plant at 7 A.M. and at 4:15 P.M. the first ovens were put on producer gas. Because of operating difficulties the required amount was not available until about 11:15 A.M. the following day. See memo by Mr. Pritchard in files. The producer plant had been idle since September 6, at which time holder repairs were commenced.

Dec. 27, 1950

The temperature fell to 11 below zero in the early morning.

Jan. 9, 1951

Mr. C.N. Sieger, Asst. General Manager of the United Gas and Fuel Co., Hamilton, Ontario, sent here by Mr. Brenner. Wanted to visit about the introduction of natural gas. Expects gas in Hamilton in a year.

Jan. 9-10, 1951

Mr. Heinbach of American Appraisal Co. here to appraise L.P. Plant equipment.

Jan. 11, 1951

Mr. P.H. Weinheimer here to see about adding 20 ovens on Battery #4

Jan. 27, 1951

The most severe cold wave of the season started:

Highest temp.

Lowest temp.

Jan. 27 Sat.

+22

+13

28 Sun.

+15 1:30 P.M.

-6 11:59 P.M.

29 Mon.

-6 12:01 A.M.

-17 11:59 P.M.

30 Tues.

-3 1:30 P.M.

-24 7:45 A.M.

31 Wed.

+6 4:30 P.M.

-5 3:00 A.M.

Feb. 1 Thurs.

+4 1:25 A.M.

-19 11:59 P.M.

2 Fri.

Five days later there were 3 more subzero days as follows:

3 Sat.

-3

4 Sun.

-11

5 Mon.

-8

6 Tues.

-3

7 Wed.

-11

8 Thurs.

-8

9 Fri.

+10

Feb. 1, 1951

Old Ben Illinois coal increased 20¢ per ton because \$1.60 per day to miner's increases the coal cost 24¢ per ton--F.F. Browning, V.P. Old Ben Coal Corp.

Feb. 19, 1951

Mr. Lennon, an auditor for Arthur Anderson Co., was here to inspect the ovens in connection with repair work to the end flues and mains.

Jan. 7, 1951

Milwaukee completely changed over to natural gas

Apr. 11, 1951 7:15 A.M. Discontinued Producer Plant Operation

June 14, 1951 Mr. Allen and Mr. Baker of the American Natural Gas Company accompanied by Mr. Dixon of the Payroll Department, visited the plant this P.M.

June 1950 The inventory price of producer fuel was reduced from \$11.50 to \$7.50 per ton.

June 9, 1951 Mr. Kreuz entered hospital for an appendectomy. Released from hospital June 23rd.

July 14, 1951 Natural gas line washed out at Womego, Kansas July 14 and put back in service again on July 27 - at closing of the Kansas River

July 21, 1951 Starting using gas under #1 boiler for the first time. 2 P.M.

Mar. 20, 1951 Started using double-deck buckwheat and ~~thrifty~~ ^{PEA COKE} nut screens

Aug. 9, 1951 Started using the two new ammeters on Block 1 and 2 pushers.

Aug. 28, 1951 As of August 28, 1951 the freight rate on Illinois coal increased from 3.76 to 3.96 and the breeze from Chicago from 2.05 to 2.17. Switching charge to the East Yard increased to 6.04.

Oct. 1, 1951 Michigan-Wisconsin Pipe Line Co. increased the rate of natural gas to its customers from 28¢ to 31½¢ per M effective Monday, October 1, 1951

Allen Brodd, Orville Rheinganz, L.G. Sahlin, Lloyd Nemeyer---Arthur Anderson men.

Apr. 17, 1950 New furnace screen was installed

Sat. Oct. 20, 1951 1:27 P.M. The first burners were lighted under the 20 new Solvay ovens. Some drying out effect has been taking place a few days before the gas was lighted in the flues.

Nov. 15-16, 1951 Discontinued the use of gas in #1 boiler at 7:35 A.M. November 15, 1951 and in #2 boiler at 7:45 A.M., November 16, 1951.

Nov. 16, 1951 Stanley Jaroszewski was fatally injured at 10:30 A.M. when he stepped in front of a moving quenching car and was crushed between the truck and frame or axle and the ties. He died at St. Lukes Hospital at 3:25 P.M. November 18, 1951.

Nov. 27, 1951 Mr. O.H. Chambers and Mr. Edward J. Helm of the Koppers Company were at the plant to discuss reconstruction of Battery No. 1 and the Benzol Plant.

Dec. 4, 1951 Mr. O.H. Chambers and Mr. Harkness, Estimate Engineer, were at the plant to discuss the reconstruction of Battery No. 1 and the Benzol Plant

Dec. 6, 1951 Glenn R. Chamberlain, Pres. of Milwaukee Gas Light Co., Dudley C. Brown, Executive Vice President of Milwaukee Gas Light Co., and Wm. C. Woolfolk, Chairman of Michigan Consolidated Gas Co., were at the plant to inspect the installation of the 20 new ovens.

Dec. 17, 1951 The new quenching car was received today. Received and quenched its first load of coke from the ovens at 1:45 PM, January 24, 1952.

- 12-12-51 First charges of the 20 new ovens--Oven #51 at 12:55 P.M.; #61 at 1:15 P.M.
- 12-29-51 10:30 to 11:30 A.M. Mr. Dudley Brown brought his son David (6 years old, more or less) to "ride on a steam locomotive." The boy, a steam locomotive enthusiast, got a big thrill out of riding the locomotive as it switched a few cars around the coke tracks. Mr. Brown stayed with him to guard against an injury.
- 12-31-51 Mr. Louie McClintock left construction work today. Mr. Schwab also left today.
- 12-21-51 Mr. Barron left construction work today.
- 12-13-51 First coke was pushed at 11:05 P.M. in new ovens.
- The new ovens were started using an 85/15 mixture but at 12:58 A.M., Dec. 20, the mixture was changed from 85/15 to 55/45 and at 12:49 P.M. Jan. 1, 1952, it was changed from 55/45 to 50/50 to make it the same as was being charged in the 80 ovens of battery 3 & 4.
- At 6 P.M., January 6, 1952, the foundry mixture being charged was changed from 50/50 to 55/45 to augment the amount of surplus gas.
- From 12:15 A.M. December 20 to 3:45 A.M. December 22, every third oven in battery #1 was charged with the 85/15 mixture. The remaining ovens were the 55/45 mixture.
- 12/21-26-27 - Students and outside men worked a total of 292.50 hours. Rate \$1.53--total \$447.53. (shoveling snow)
- 1-11-52 Cut in new coolers at 3:30 P.M.
- 1-15-52 Started to use butane at 10:50 A.M. None had been used since May 6, 1951.
- 1-18-52 As of 1 P.M., Jan. 18, 1952 the range screens were changed from 2 $\frac{1}{2}$ " to 2-5/8"
- 1-19-52 As of 2 P.M. Jan. 19, 1952 the crusher was changed from 3 $\frac{1}{4}$ " to 3 $\frac{1}{2}$ "
- 1-28-52 Mr. Zachem and Mr. Cottle left construction work today.
- 1-21-52 Mrs. Chamberlain died of a heart ailment.
- 1-29-52 Mrs. Dudley B.W. Brown was made President of the Milwaukee Gas Light Co.
- 1-30-52 7 A.M. Started trial run of the Producer Plant finished 8:45 A.M. 1-31-52 21 walls Battery #2 on producer gas from 7:15 P.M. 1-30- to 8:45 A.M. 1-31-52 4081.6 therms of oven gas released
- 2-2-52 Moved the sample room equipment from the lime shed to its new location in the repair shop building.
- 2-6-52 Tug removed St. Heekin and moved Str. Ireland to our dock. Left 9:30 AM 3/26/52
- 2-6-52 Mr. Peters and Mr. Jackson of the E.E. Gillen Co. were here to examine foundation rods at the dock.
- 2-6-52 Mr. E.F. O'Gara of the Combustion Engineering Superheater, Inc. was here to discuss burning 100% coal in #8 boiler.

Oct. 15, 1951

Oven 32⁴ was relined as follows:

Left empty 4:40 P.M., Oct. 15, 1951
First charge 4:15 P.M., Nov. 6, "
First push 10:50 A.M. " 10, "

Feb. 18, 1952

Mr. E.N. Bonnett of Stacey Bros. Co. was here to discuss repairs to the fuel gas holder. Mr. Kreuz, Tilley, Pritchard, Mueller and I were at the meeting.

Feb. 26, 1952

The new Diesel locomotive was received today. Weight 64 tons, 1700 lbs. Placed in operation at 8 A.M., February 29, 1952.

Mar. 17, 1952

Frank O. Mr. Pandorf, Vice President in charge of Engineering, Stacey Mfg. Co., Cincinnati, was here to inspect oven gas holder.

March 1952

We are paying \$540.59 which is one-half the invoice for towing the Str. Ireland to our dock on February 6, 1952.

March 25, 1952

Trial run of the Producer Plant started at 7:15 A.M., March 25, and ended at 8:45 A.M., March 26.

20 walls on 11:45 A.M., March 25

10 " " 12:15 P.M. of " " "

All walls off 8:45 A.M. " 25

#5 and #6 Producers

63 charges

March 28, 1952

Mr. Pritchard made calculations today showing that 18% of our steam production is used in the Power House to generate electricity.

March 24, 1952

We are paying \$661.65 which is half the charge of towing the Str. Heekin from the Coke Plant to the City Dock and from the City Dock to the Steel Dock - City Basin.

April 1, 1952

Started trial run of the Producer Plant at 7:00 A.M. and ended at 8:20 A.M., April 2nd.

April 9, 1952

Oven #7, battery 4, left empty at 4:40 A.M. for repairs

April 16, 1952

A small fire was dug out from a cut in section #6 of the coal field. It apparently started about 6 ft. above the water line and 20 or 30 ft. inside the circle track. On April 14, the characteristic odor resembling kerosene was noticed. On April 15, a cut was started and the smoke was quite dense. On April 16, the fire was dug out before it had a chance to spread. This was the only fire of the season.

June 20, 1952

Friday 1 P.M. Mr. Kreuz suggested that the coking time in batteries 3 and 4 be increased from 30 to 31 hours because of diminishing orders for foundry coke. Also, asked us to maintain therms to the Gas Co. between 59,000 and 59,500.

June 23, 1952

Oven gas holder was taken out of service for repairs according to schedule and the producer gas holder placed in use instead of the oven gas holder.

Jan. 14, 1952

Cut in the new cooling coils for the 20 oven installation. This item is recorded in the daily log book in the By-Product Department.

Feb. 25, 1952

First cars were loaded over the boom of the new Foundry Loading Station.

Note from B.P. Operator's 1952 log and instruction book:
"March 6, 8-4 Operator-Keep fans going on ceiling heaters in
north house." (signed) E.J.Bird

June 25, 1952 Mr. Kreuz requested that we discontinue the use of anthrafine
in the foundry mixture

July 31, 1952 Started debenzolised oil pump in the L.O. plant as provided for
in Budget Item #9-1951.

Aug. 19, 1952 Fuel gas holder back in service at 2:50 P.M. Out of service for
repairs from June 23 to Aug. 19th, 1952.

Sept. 1, 1952 Dan Campbell and Alex Hendersen were here to see about making a gas
change. Joe Price and Lorin Saueressig were also with them, also
Mr. Pritzlaff.

Sept. 5, 1952 The small lathe covered by Budget Item #1 was placed in service.

Sept. 26, 1952 The National Bituminous Coal Wage Agreement of 1950 as amended
January 18, 1951, contained a provision which permitted it to be
terminated upon sixty days' notice by either party. The United
Mine Workers of America availed themselves of this provision to
cancel the contract as of September 20, 1952. A new contract was
agreed upon September 20 to be effective October 1, 1952, the
provisions of which called for an increase in wages of \$1.90 per
day and 10¢ per ton on the Welfare Fund. (See Raleigh Smokeless
Fuel Co. letter Sept. 20, 1952)

"STEEL" Sept. 1952 The new coal wage agreement provided for a \$1.90 increase in the
present basic daily wage of \$16.35 and a 10¢ a ton rise in the 30¢
per ton operator paid royalty to the U.M.W. Welfare and Retirement
fund.

Oct. 13, 1952 Started using the new quenching car pusher-signal system

Aug. 18, 1952 No. 8 boiler placed on load August 18 using straight Indiana coal.

Nov. 11, 1952 Started the work of flushing Koppers oven floors

Oct. 2, 1929 The Cottrell Tar Precipitators for oven gas started taking current
directly from the substation at 5:15 P.M., Oct. 2, 1929. Stated
rate 14 Kw per hour.

Dec. 1943 The Cottrell Tar Precipitators for producer gas were placed in
service. Stated rate 3 Kw per hour.

March, 1945 The 100 HP A.C. motor for the spare boiler feed pump was installed
in the boiler house.

Feb. 5, 1953 Gas Co. men - Henry Dropp, Dan Campbell, Red Ungethuen and Jack Wright,
came to the plant to discuss a new plan for handling surplus gas. See
report in files

Feb. 6, 1953 Mr. Thayer, of New York, visited our plant to get figures on production
and revenues, etc. Capt. Fink had referred him to Mr. Kreuz who sent
him down to the plant.

- Jan. 18, 1953 Started using straight breeze in boilers #3, 4, 5, 6 and 7 except when out for repairs. #1 and #2 using natural gas. #8 boiler straight Indiana coal.
- Apr. 30, 1953 Art. Hennell retiring after 19 years' of service.
- Construction was started on Mayville Coke Plant in July, 1912. The first battery of 36 ovens commenced operation in December, 1913. Two additional batteries of 36 ovens each were later constructed and the plant finally shut down on April 21, 1921. The idle plant remained for 2 or 3 years and was then dismantled.
- June 2, 1953 Mr. R.B. Light, an inspector for the North America Companies, was here today. He first talked with Mr. Kortsch and later Mr. Kullmann took him around the plant. He finished his inspection June 3.
- June 8-9 Two Koppers men, Mr. Kimmel and Mr. Johnson, were here two days to arrange schedule for erecting the new collecting main for battery #4.
- May 25, 1953 The new locomotive crane, purchased under Budget Item #12, year 1952, was first placed in service today. *INDUSTRIAL BROWN ROIST CORP #5-DISEL 84WHEEL 58x5x60' 30004-10394016- 0.17 \$45675.00 28420 66 4602330*
- May 25, 1953 The high volatile coal which had been in winter storage was used up.
- June 21, 1953 Finished using the old low volatile coal which had been in winter storage. This had recently been used in the low volatile content of the foundry mixture--50% old low and 50% new low.
- June 19, 1953 Contractor finished pointing up boiler house and stack for the Koppers batteries. 15 new steel bands on the stack for battery #1 at an additional cost of \$1875 making total repairs to this stack \$3450.
- July 9, 1953 Started using west new truck scale. *(East scale not finished)*
- July 10, 1953 9:30 A.M. Pushed Oven 35, Block 4--first push in new main.
- July 13, 1953 5:15 P.M. Made first charge of the 30 oven section of battery #4 in the new collecting main.
- Aug. 13, 1953 10 to 12 noon. Geo. Wilkins, P.M. & Co., had two guests from Rundle-Spence Mfg. Co. The Purchasing Agent and the Metallurgist. They were primarily interested in our process and had no complaint. We visited the coke screening, ovens pushing, coal handling and L.O. (O.J.P.) John Ketelhorn, Purchasing Agt.; Ralph Severson, Metallurgist.
- Sept. 1, 1953 All coal removed from North Western-Hanna dock, E. Greenfield Ave.; windows of service bldg. boarded up. Reports are that dock is to be used for scrap iron. One gantry bridge dismantled, two remain. Considered purchasing one at scrap value for use in handling stock coke but engineers did not think idea worthwhile. Dust conditions at main office greatly improved since no more coal trucks pass by.
- Sept. 15, 1953 At about 12:20 Mr. Heller, an aerial photographer, took pictures of the coke plant. (See memo in file).
- Oct. 1953 Using Hallemite Cement for patching cracks in the Domestic House .175 per lb.
- Oct. 29, 1953 Reported that Seaboard strike is ended and men went back to work receiving 5¢ an hour increase.
- Oct. 21, 1953 New Lathe placed in service. *L9890*

- Nov. 7, 1953. As of 10:30 A.M. today the new decanter for the Koppers ovens was placed in service. It was authorized under Budget Item #30, Necessity Certificate #16916.
- Nov. 11, 1953 The old lime shed was torn down today in preparation for putting up a more suitable structure for our maintenance forces as called for under Budget Item #10
- Dec. 8, 1953 Received new Nash Statesman for the Welfare Department - Price \$2717.95. The old Buick car which Mr. Lovett had used and the Ford Station Wagon were turned in on the deal.
- Dec. 5, 1953 George Dorr left for Florida on vacation and retirement which will be effective as of December 31, 1953.
- Dec. 7, 1953 Marchese started hauling dirt away from the East Yard. Finished Dec. 17th Some 10,000 cubic yards had accumulated since January, 1953.
- Dec. 29, 1953 The new cement and mortar mixer, authorized under Budget Item #8- Year 1953, was placed in operation.
- Dec. 30, 1953 As of today, the new bending roll, authorized under Budget Item #11, Year 1953, was placed in service in the Iron Shop
- Jan. 19, 1954 As of 4 P.M. gas was turned on the auxiliary fuel main for Battery #2 authorized under Budget Item #28, Year 1954
T. P. OF BATTERY
T. MAKE FOUNDRY
- Mar. 17, 18, 19, 1952 Some 25,000 gallons of tar was reclaimed from the tunnel following a leak in one of the tar lines. An unknown amount of tar was lost in the river and some in the coal field. It may have been a 1,000 gallons or more.
- Jan. 23, 1954 #5 Booster was given a final test and is ready for use. It had been sent to the Connersville Co. for reborring the cylinders and general overhauling. Connersville Co. bill - \$6,862. (included prepaid freight)
- Feb. 12, 1954 The Electric Co. replaced the lead sheathed cable which supplies power to the emergency boiler feed water pump in the boiler house. The cable had a shaft, probably defective. LABOUR - 40220 CABLE ETC. 63820
T. to 1040
- Feb. 26, 1954 As of today the installation of the new absorbent oil pump for the Light Oil Department was completed and a successful trial run was made. It was authorized under Budget Item #23, Year 1953 - \$4,500.
- Feb. 26, 1954 Paul Kortsch left on vacation and to retire as of March 31, 1954
- March, 24, 1954 Mr. Blakely and Mr. Botsch, officers of the Marine National Bank, called at the office today. Mr. Haeffner introduced them to Mr. Pritchard and myself.
- Apr. 5, 1954 As of today, the storage building for maintenance equipment, authorized under Budget Item #10, Year 1953 - \$5,000., was completed and placed in service.
- Apr. 20, 1954 As of today the new steam pump for the Koppers collecting main, authorized under Budget Item #29, Year 1953 - \$5,000, was completed and a trial run was made
- Apr. 28, 1954 As of today Budget Item #5, Year 1953, "New Circuit Breaker and Equipment for the Domestic House-\$11400." was completed and the equipment placed in service.

May 31, 1954 New Winch for Cable Haulback was completed and placed in operation
Budget Item #6-Year 1953 - \$2290

July 22, 1954 The North Western-Hanna Coal Co. dismantled the last of the 3 gantry
bridges at their Greenfield Ave. Dock. One had been dismantled a
year or so ago.

Sept. 28, 1954 Purchased power went off for five minutes commencing at 11:15 p.m. today.

June 30, 1954 Two Koppers ovens were left empty but kept at 1700°F. two months for
test purposes. There was no serious damage but they leaked badly when
again charged with coal (See report in files)

Oct. 3, 1954 At 5:15 p.m. purchased power failed apparently for a fraction of a
second. #1 and #2 boilers on natural gas shut off, also north B.H.
and primary pump. Cottrells did not go out.

Oct. 20, 1954 Mr. Burdick left on a vacation and is to retire as of December 1, 1954

Dec. 15, 1954 Mr. Brill left on a vacation after which he is to retire

Jan. 17, 1955 Mr. Kreuz telephoned at 11:15 a.m. today and proposed that we go to
48-hour coke on the Solvay batteries which will mean 1,000 tons of coal
per day. The reason for this change is to produce more large foundry coke.

Jan. 7, 1955 Mr. Dorr Died as the result of a heart attack.

Aug. 7, 1955 Mr. Mathis of P.M. Co. spent the greater part of the day here in-
specting coke and screening operations. He reported the coke was
satisfactory and of good quality.

Aug. 7, 1955 Harry Wegner and Alex Turnbull investigated a complaint by Motor
Gastings Co. in regard to small sizes being present in a shipment of
medium size coke. Shipments to this customer are made in open top
equipment and Alex believes that the cause of the complaint was due
to the considerable drop that the first coke loaded into the car
suffers because of the inability of lowering the boom below the top
of the car. The customer said that they did not have this trouble
with shipments of St. Paul coke; however, I believe such a statement
is not based on fact.

Aug. 8, 1955 A.P. Mueller and W. Malisch went to Urbana, Ill to witness the
operation of their pilot coke oven and to discuss with them the use
of Indiana coals for use in foundry coke production.

Aug. 7, 1955 The yard locomotive went off the track due to "splitting" the
switch about 1 p.m. The Northwestern rerailing crew foreman was
called and was delegated to rerail the locomotive and one set
of trucks of a loaded car. They started on this work late in the
afternoon and finished at 7 a.m. the following morning (8-8).

Sept. 16, 1955 Mr. Boynton, W.P. Millar and Mr. Padorr, of the Boynton Co.,
visited the plant Friday, Sept. 16. They made a trip thru the
plant, obtained some other records and finished their visit
about 3 p.m.

Jan. 1, 1956 Natural Gas Line interruption due to faulty valve.

Jan. 8, 1959 - Mr. J.D. Nelson, Jr., Construction Supt., Utility Service Corp. was given permission to block off Greenfield Ave. East of the N.W. Ry. and use the space in front of our East Yard garages as a right-of-way.

Jan. 9, 1959 - Called Snelling Robinson today to see if he could try to advance the delivery of the new Link Belt crusher.

Jan. 22, 1959- Mr. Richard Bohnet, Sales Trainee, was here to become acquainted with the Coke Plant. (P.M.& Co.)

Jan. 30, 1959-Mr. Lowell Pfeiffer of the Walston Investment, Inc. called.
(BR 3-1580)

Feb. 13, 1959-Mr. Lillybeck, Chief Metallurgist; Mr. Dexheimer, Superintendent; Mr. Dexheimer, Purchasing Agent and two other gentlemen, accompanied by George Wilkin visited the plant today from 11:30 a.m. to 1 p.m. These men were from the Brillion Iron Works, Brillion, Wisconsin. Gerald Lenz showed them the operation of the coal handling, ovens, coke screening plant and by-product recovery and also showed them the colored movie of the coke plant. A.P. Mueller and O.J. Pritchard greeted them before and after the tour and they left for lunch with George Wilkin at 1:15 p.m.

Feb. 23, 1959-Mr. Exum of the Old Ben Coal Co. called from Chicago regarding a high-ash, low volatile coal which could have potential possibilities for producing a low carbon pick-up coke. Advised Mr. Exum his report did not contain sufficient data to be valuable. He said he would be coming to Milwaukee possibly the latter part of this week.

Feb. 24, 1959-Mr. McCarthy of the Island Creek Coal Co. telephoned from Chicago for the purpose of arranging a visit on the 25th; however, since Mr. Kimmel had called previously and made an appointment on the 25th, I informed Mr. McCarthy I would not be available and suggested that he call Mr. Kreuz. Mr. McCarthy intended to bring Mr. Joe Dougherty, Carbonization Engineer, with him.

Feb. 25, 1959-Mr. Kimmel of the Koppers Company visited the plant for no evident purpose, except probably to establish good will.

June 30, 1959-Called Mr. H.M. Heisig, Sr., Chief Chemist of Sewerage Commission, for approval of our leaving the NH₃ in our liquor effluent going to the domestic sewer for period July 4 to July 20th.

Mr. Heisig said it would be satisfactory as this has been done before without causing trouble and with no proven evidence of advantage.

Sept. 24, 1960-Mr. O.J. Pritchard died of a heart attack.

B8

Early History
~ 1910

I.

RELATIONS OF THE PARTIES.

Before taking up the consideration of particular points, it is desirable to call attention to the unusual relations existing between the Semet-Solvay Company and the Milwaukee Coke and Gas Company. These peculiar relations, and their bearing on the matters to be stated later, appear from the following facts:

In the first place, the Coke Company owns the plant and has leased it to the Solvay Company for a rental; but notwithstanding the lease, the Coke Company, though landlord and receiving rent, remains in possession. The Solvay Company, though tenant and paying rent, is not in possession. Thus the possession of the lessor exists for the account of both parties.

In the second place, the lessor remains in possession under a contract to carry on the operation for the lessee, on specified terms, and in addition to paying rent the Solvay Company pays an agreed operating charge. This operation is thus carried on by one party, for the account of both parties.

And also, while the Coke Company is bound to furnish the coal and is the owner of it while it remains coal, yet the two classes of products belong partly to one party and partly to the other—the coke to the Coke Company and the gas and other by-products to the Solvay Company. And as the production of products and by-products of the proper quality and in the proper quantity and proper relative proportions depends on a just and fair disposition of coal supply, methods of utilizing and handling the coal, and maintenance and operation of the ovens, the duties and obligations of the party who is entrusted with the direct and immediate physical control of all these matters, must be considered from the point of view of the two different parties who are separately interested in distinct branches of the net results.

In fact the situation is peculiarly one which imposes a fiduciary character upon the position of the party in control, and requires it, as the trusted party, to exercise special vigilance in protecting all the just rights and interests of the party which has trusted it and whether these rights are expressed in the contract or implied from the fiduciary character of the relation. One of these rights is that conferred by paragraph 6 of part I of the contract and the corresponding provision of part II, relating to the supervision of the by-

product operation. In so far as this extends, it is the duty of the Coke Company to comply accordingly with all just requirements of the Solvay Company, and in all such matters as may be beyond the scope of that provision, it is equally the duty of the Coke Company, as the fiduciary and trusted party, to protect all the express and implied interests of the Solvay Company. This fiduciary character of the relationship is to be borne in mind in connection with all the points stated below, as emphasizing the rights of the Solvay Company as specifically expressed in the contract, and as conferring upon it all the rights of fair protection which are always implied in the fiduciary relation.

II.

ENGINEERING COMMISSION.

The engineering commission on the Second Eighty Ovens became due and payable "when the said Second Eighty Ovens and apparatus connected therewith were completed in good working order and put in run," but has not been paid, although payment has been requested. This commission amounts to \$49,609.62, and with interest at the rate of 6% per annum since it became due should be paid.

Article II of the "new contract," dated June 19, 1905, provides for the erection of the Second Eighty Ovens. The Solvay Company agrees to furnish the plans, etc. (Section 1); to construct, and, if able to procure labor and material in sufficient amounts and with sufficient promptness, to complete them before January 1, 1906 (Sections 2 and 3), and after the ovens have been completely installed and put in good order, to put them in run, and as each forty ovens are put in run, to turn them over to the Coke Company to operate precisely as it operates the First Eighty Ovens (Section 7).

Article II, Section 4 expressly provides for the payment of the engineering fee in substance as follows:

"For the preparation by said Solvay Company and the use
"of said plans and specifications in the erection of said Second
"Eighty Ovens and apparatus connected therewith hereinbefore
"described, and for the services of the engineer or engineers in
"charge of the erection contemplated by this agreement, the
"Coke Company shall pay to the Solvay Company the sum of
"five per cent. (5%) of the cost of the construction of the
"Second Eighty Ovens and apparatus connected therewith,
"* * * * and said engineering fee of five per cent. shall
"become due and payable from the Coke Company to the
"Solvay Company when said Second Eighty Ovens and
"apparatus connected therewith are completed in good working
"order and put in run," etc.

The Solvay Company furnished the plans, erected the ovens, put them in run and turned them over to the Coke Company to operate in May, 1906, and the Coke Company has since operated them as a part of the plant. The engineering fee above mentioned became due "when the ovens were completed in good working order and put in run" as aforesaid.

III.

REBATE ON ACCOUNT OF COAL MIXTURE.

The Solvay Company claims that the provisions of Article I, Section 7 of the "new contract," dated June 19, 1905, which by Article II of said contract was extended to the Second Eighty Ovens, relating to the allowance of a rebate or abatement in case a mixture of coal was used, should be deemed operative from and after the time when the obligation of the Solvay Company to install compression ceased. The abatement referred to is the one based on 15 cents per ton for 25% Smokeless Coal, graduated in proportion to the Smokeless Coal used.

Article I, Section 6 of the "new contract" obliges the Coke Company, in taking over the operation of the entire plant, to furnish all material for the operation of the plant and pay therefor.

Article I, Section 7, provides the coal to be furnished for coke at said plant shall be of a quality suitable for the making of good coke in retort coke ovens, of a sufficient purity to produce coke of the chemical composition required by the market tributary to said plant, and declares:

"The Coke Company, as stated in Paragraph II of this agreement, contemplates using Boomer Coal, or coal (for convenience herein designated 'other coal') containing approximately a quantity of volatile equal to the quantity of volatile contained in Boomer Coal. Boomer Coal or such 'other coal' may at all times be used by said Coke Company without any abatement if Smokeless Coal is not mixed therewith. 'Other coal' for the purposes of this agreement, is defined to be coal which at the time used contains approximately a quantity of volatile equal to the quantity of volatile contained in Boomer Coal; and in case at any time, by reason of the exhaustion of the Boomer mine or for other reasons, Boomer Coal cannot be obtained or used, such 'other coal' shall contain a quantity of volatile equal to the average quantity of volatile in Boomer Coal shipped to this plant in the period of this contract preceding such time. In case Smokeless Coal shall be mixed with Boomer Coal or 'other coal,' the abatement hereinafter provided for shall be made."

In Paragraph II Solvay Company agrees to pay an operating charge on each and every ton of coal coked, subject to the following statement:

"The Coke Company contemplates using at said plant so-called Boomer coal or 'other coal' either exclusively or so far as is practicable, containing a quantity of volatile estimated to possibly range from 32% to 33%, and if it cannot exclusively use Boomer Coal or 'other coal,' to use a mixture composed of Boomer Coal or 'other coal' and Smokeless Coal estimated to contain from 18% to 22% of volatile; but it is expressly agreed that the Coke Company does not undertake to supply any particular brand of coal, but only such coal as may be of a quality suitable for the making of good coke in retort coke ovens, and of sufficient purity to produce coke of the chemical composition required by the market tributary to said plant; and it is expressly agreed that the figures named of the estimated volatile in Boomer Coal and in Smokeless Coal respectively are in no sense a guaranty that either Boomer Coal or 'other coal' or Smokeless Coal would have the percentage of volatile above mentioned."

Then follows the provision for the abatement in case a mixture of coal is used, subject, however, to the following condition:

"No amount shall be due from or payable by said Coke Company to said Solvay Company for any such mixture of coal until after compressors satisfactory to the Coke Company shall have been installed in sufficient numbers and of such character as to suitably compress the coal in good and workmanlike manner."

Except for this condition the operation of the abatement provision would have gone into effect at the time the Coke Company took over the operation of the plant, for at that time and ever since a mixture of Boomer Coal and Smokeless Coal has been used, resulting in a corresponding loss of the quantity of by-products by reason of the smaller percentage of volatile in the Smokeless Coal used. The Solvay Company's right to insist upon the abatement depends, therefore, upon the meaning and effect of this condition limiting the time when the abatement takes effect. On the part of the Coke Company it has been claimed that inasmuch as compressors have not been installed, the abatement provisions have not gone into effect. On the part of the Solvay Company it is claimed that the installation of compressors was prevented and waived by the Coke Company, and that the effect of the waiver was tantamount to performance and immediately put in operation the abatement provision.

This position of the Solvay Company is based upon the following facts: The Solvay Company's obligation to install compression related solely to a type of oven specified in the contract and there described as a 4-high oven. This was the highest type of oven to which compression had ever been successfully applied, and the engineering proposition of installing compression for 5-high ovens,

if in fact practicable at all, is a radically different proposition from that contemplated in the contract. It was distinctly recognized that the matter of compression, while actually in successful use in European plants, was still in a somewhat experimental stage in this country, as applied to the particular requirements of the type of ovens in question, at least to such an extent that it would be necessary to take some considerable time to work out the best solution of numerous technical details. And it was particularly agreed that Solvay Company should begin by bringing on to Milwaukee a specified experimental apparatus which it was then working up at another point, and should proceed to perfect it and put it into use at Milwaukee. The Solvay Company proceeded accordingly, but was very much hindered in its efforts by lack of co-operation and even by serious interference on the part of the operating force at the Milwaukee plant. It succeeded, however, in advancing the matter to a point where a considerable number of cakes of coal were successfully compressed and charged into the ovens. It had then spent a large amount of time and money on these experiments and was ready and willing to continue them to the point of installing compressors to do all the work called for by the contract. But at this point the Coke Company decided not to have the experiments proceeded with further along the lines contemplated in the contract, and also took a step which rendered it impossible to carry out the contract provisions, for it requested permission from the Solvay Company to increase the height of its ovens, making them what is known as 5-high ovens. There never had been at that point, and never has been since, any agreement whatever on the part of the Solvay Company to install compressors for 5-high ovens. In connection with the Solvay Company's consent to the raising of the ovens, this proposition was fully recognized by the Coke Company, and it agreed in writing that if it should in future wish to install compression, it would effect the installation itself, the Solvay Company being merely bound to reimburse the Coke Company for its outlay, to the extent of what it would have cost to install compression for the 4-high ovens. This arrangement involves two distinct propositions, first, that the obligation of the Solvay Company to itself effect installation thereupon ceased; and, secondly, that it was recognized that the Solvay Company never had been under any obligation to install compression except in connection with 4-high ovens, such as no longer existed on the plant after the ovens had been raised to 5-high.

The position of the Solvay Company is, that when its performance of the condition became impossible through the voluntary acts of the Coke Company, the condition thereupon became eliminated from the contract. This would result both from the fact that the Solvay Company had tendered and was willing to perform the condition, and that this was equivalent to performance, and satisfied

the condition, and also, from the fact that the acts of the Coke Company, in rendering performance impossible, waived the condition as a feature of the contract. This leaves the contract standing in all respects as if the clause containing the condition had been omitted from the contract at the time of the execution.

It is also to be noticed that this view of the proper construction of the contract is not in any sense of a technical character, but is fully supported by a consideration of the reasons which led to inserting the condition in question. The provision that the abatement should not begin until compression was installed was inserted merely for the purpose of stimulating the Solvay Company to install compression as soon as possible, and therefore as soon as it became settled that it was no longer its duty and no longer within its power to do so, and that the Coke Company no longer wished to have it do so, the reason for the condition wholly disappeared.

That this is so appears very clearly from a consideration of the connection between the compression and mixing of coals, and what is said below upon these points is set forth for the purpose of showing why it was that the contract contained the provision for an abatement and the bearing on this point of the subjects of compression and of mixing.

It is a fact that at all times since the Coke Company took over the operation of the plant, a mixture of Boomer Coal or "other coal" and Smokeless Coal has been used with an increasing proportion of the latter, and it is obvious that to the extent that Smokeless Coal has been used, the quantity of by-products has been lessened by reason of the smaller percentage of volatile in the Smokeless Coal.

The Solvay Company's only returns under the contract, in consideration of its payment of rental and operating charge, are such as are derived from the by-products which belong exclusively to the Solvay Company by the terms of the contract, while the coke is the property of the Coke Company.

For its bearing on the quantity and quality of coke on the one hand, and the quantity of by-products on the other, it is important to notice that there are several methods which can be pursued in regard to the selection and handling of the coal. In the first place, it is practicable to use high volatile coal and charge it uncompressed into the ovens. This class of coal gives a larger return of by-products but if charged in the manner indicated it does not give a satisfactory quality of coke. Instead of this, it is practicable to mix high volatile coal and Smokeless Coal and if a proper proportion is maintained, the quality of the coke is improved and the quantity increased, while the return of by-products is reduced. As a third method, it is also feasible to use high volatile coal, but to compress it before charging. The result of the compression is to improve the quality of the coke, while the absence of any substantial percentage of Smokeless Coal

results in maintaining the large return of by-products. The two methods last mentioned, namely, the use of a mixture, uncompressed, and the use of high volatile coal, compressed, are alternatives, either of which will result in producing a good coke, while the difference between them is that one method gives a smaller and the other gives a larger return of by-products. The compression of coal in itself does not result in reducing the by-product return. This is the result that is arrived at by the use of a mixture of the two kinds of coal. Accordingly, in considering the bearing of the abatement provision of the contract, it is obvious that the abatement was not provided for in order to offset any contemplated loss of by-products resulting from the use of compression. On the contrary, the installation of compression in connection with the corresponding use of high volatile coal would in itself, and to the extent to which it is employed, render any provision for an abatement unnecessary. Inasmuch as it was not the installation of compression, but the absence of it, that would give rise to any occasion for an abatement provision, it follows that the contract condition that the rebate should not go into effect until the installation of compression was inserted for some other reason. Indeed, the time mentioned in the condition, namely, the installation of compression, was the very time when the abatement would become pro tanto unnecessary. The only other reason there was for inserting the condition in question was that the Coke Company desired to have compression installed at the earliest practicable date, and accordingly it was provided that until that result was attained, and while in the meantime the mixture of coal should continue with its resulting decrease in by-products, the Solvay Company should continue to suffer a corresponding loss in the nature of a penalty for any delay in the installation of compression. The inducement to celerity thus held out to the Solvay Company was that as soon as it could succeed in getting compression installed, it would either stop its loss on by-products through the use of compressed high volatile coal, or, in so far as the Coke Company should then fail to employ compression, in the whole or any part of the plant, or should still prefer to use a certain admixture of low volatile coal, the resulting shortage in by-products would be off-set by the payment of the abatement.

Such being the reason for the insertion of the condition, it follows that the cessation of the Solvay Company's obligation to install compression necessarily eliminates the condition. As soon as the Solvay Company ceased to be obliged to install compression, the need of haste in effecting installation evidently disappears. It is impossible to contemplate the idea of continuing to penalize a party for non-performance of a condition for the performance of which he has been relieved. The only reason why the Solvay Company did not receive this rebate from the start was that it was considered im-

portant to place it under a burden which should continue until it had relieved itself therefrom by doing what it had contracted to do, and as soon as the obligation to do this ceased the reason for continuing the burden ceased also. In other words, the contract specifically recognized the right of the Solvay Company to either have the full by-product return or else to have adequate compensation in cash for reduced output, and the only qualification in this recognized right was that such relief should be postponed until the Solvay Company should have brought about a certain condition of things at that time strongly desired by the Coke Company.

If any confirmation of this construction of the contract were required, it is to be found in the whole history of the relations between the parties from the beginning. For from the inception of the original negotiations, the negotiations and the "first contract" were all based on the mutually recognized intention of the Coke Company to use a high volatile coal. This is shown in the correspondence preceding the making of the "first contract," the investigation by the Coke Company of different high volatile coals, and of the results attained therefrom at Detroit and elsewhere, the contracts for Boomer Coal then made by the Coke Company for a full supply for the entire requirements of the First Eighty Ovens for a long term of years, the entire absence of any discussion of the mixture of high volatile and Smokeless Coals, the fact that the very idea of such mixing was then unfamiliar and wholly undeveloped, and finally the provisions of Article I in the "first contract" for compression, and the absence of any provision for apparatus for mixing.

By the time the "new contract" was taken up for negotiation the advantages of mixing the two coals, as an alternative to compression, were appreciated, and mixing had been resorted to at Milwaukee. But the Coke Company still strongly preferred to provide for compression of high volatile coal and wished to effect the installation of compression apparatus at as early a date as practicable. Accordingly, to insure early results in this line, the Coke Company procured the insertion in the contract of the condition that while the use of any admixture of Smokeless Coal, with resulting reduction of by-products, should be accompanied by a compensating rebate, yet this relief should only be afforded when the installation of compression should be effected.

The foregoing sets forth the reasons for the position of the Solvay Company that the condition of the contract, postponing abatement, is eliminated from consideration, and that as soon as its obligation to perform the condition ceased, the abatement clause went into full operation. As the Coke Company is solely responsible for the course adopted, the Solvay Company is entitled to all the rights which would follow upon performance, and is relieved from all burdens that might be imposed if the condition had gone into

effect, and the Coke Company must assume all the consequences of its act in making compliance impracticable. From October, 1906, the rebate clause went into effect, and Appendix F shows the amount of rebate due on account of the use of Smokeless Coal since that time to March 31, 1908, on the coal tonnage basis as computed by the Coke Company. This amount, \$187,255.10, plus interest at 6%, should be paid to the Solvay Company.

IV.

BURNED COAL.

One of the greatest sources of loss to the Semet-Solvay Company is due to the use of coal that has been heated in storage, often to the point of having flames playing over large areas, evolving clouds of smoke and steam, and reducing large quantities of coal to coke.

That the coal pile has been actually on fire cannot be denied. As proof, we have the testimony of men on the plant, photographs of fighting the fire, record of City fire-boat called, and samples of coal before and after being exposed in storage showing the coal, at times, to have been actually coked. We have laboratory analyses which show reduction in volatile due to the heating.

It has sometimes been claimed by the M. C. & G. Co. that coal, although heated in some cases to the extent of making it into coke, has not been damaged by this process. There is absolutely no foundation for their claim. It stands to reason that the heating of the coal in storage before it goes to the ovens has the same effect as heating it in the ovens. Hence driving off by-products before the coal goes to the ovens reduces those that can be obtained in the ovens.

That the coal has been seriously injured for by-product purposes is shown by the following:

First—General Experience: The literature on the subject of weathering and storage of coal shows clearly that the general experience is that coal deteriorates in storage when subjected to heat, and that the loss is particularly great for gas-making purposes. Certain coals show this in much more marked degree than others, and West Virginia coal is among those that show serious loss.

Second—Experience of Semet-Solvay Company: It is the experience of the S. S. Co. that the use of coal that has been heated in storage reduces the yields of by-products. (See chart of gas yields at Milwaukee with drop when using burned coal—Appendix "B").

Third—Experience of Milwaukee Coke & Gas Company: The employees of the M. C. & C. Co., as well as the S. S. Co., who have been on the Milwaukee plant, have, at frequent intervals, stated that the reduction in by-products for certain periods has been very

largely due to the coking of the coal in storage before it is charged into the ovens.

Quality of Coke: The burning of the coal has a very injurious effect on the quality of the coke. This is shown by the experience of the S. S. Co. and M. C. & G. Co. To confirm this it is only necessary to become personally familiar with conditions at the Milwaukee plant. The contract calls for furnishing coal of a quality suitable for making good coke in retort coke ovens. The burned coal makes an inferior coke, and the contract in this respect has been violated a large portion of the time.

The idea has been advanced that the coke is suitable for the market tributary to the plant, because the coke is used in the Mayville furnace, controlled by the same general interests as the M. C. & G. Co. This is of no weight, since it is well known by the M. C. & G. Co., and has been often reported by the S. S. Co., that the coke produced has been in many cases of very poor quality, due to the burned coal. That this is recognized by M. C. & G. Co. is shown by their controlling the per cent. charged of burned coal by the quality of the coke, and by their selling in 1907 a large amount of burned coal to avoid its going into the ovens.

Heating Coal Without Burning: M. C. & G. Co. may admit that burning and coking of coal in storage injures it, but that simply heating it does not. This is true provided the temperature does not rise sufficiently for the evolution of steam and gases. After that it is simply a question of amount of damage according to degree of heating. That large quantities of coal have been heated to the point of driving off gases, though not to the point of coking and burning, and then charged to the ovens, is well known both to S. S. Co. and M. C. & G. Co.

Storing of Coal: The difficulty from fires has been much increased by the fact that the coal is stored to a greater height than it should be; also by the fact that a considerable amount is below a varying level of water, which by alternately wetting and drying the coal tends to facilitate the starting of fires. This is shown by the fact that fires have been seen starting at this water line. The coal should be stored either on a well-drained area or completely submerged. If the latter, it should be drained before charging and allowance made for excess moisture as described under "Water in Coal."

Handling of Fire Situation: By far the worst fire in coal at Milwaukee was during the winter and spring of 1907 when the fire situation was handled entirely by M. C. & G. Co. Although the fire was of much greater magnitude than during the seasons that it was handled by S. S. Co., poor judgment was used in handling the matter, the City fire-boat was used less, and the fire was allowed to reach unnecessary sections of the coal, thus causing unnecessary loss of by-products to S. S. Co.

Insurance: M. C. & G. Co. placed insurance on the coal pile and asked S. S. Co. during its operation to keep a separate account of extra labor made necessary for fighting fires in coal pile, stating that it was their intention to make a claim upon the insurance companies for the burning of the coal. If any insurance money was collected for damage on the coal, none of it was paid by M. C. & G. Co. to S. S. Co. for the loss that it sustained, nor did M. C. & G. Co. reimburse S. S. Co. for the \$700 expended by S. S. Co. in fighting the fires in the coal.

Coal Mixture: When the "new contract" was drawn it was the intention to use coal compression which would involve the use of 25% or perhaps less of Smokeless Coal. Partly on account of abandoning compression the M. C. & G. Co. has used a larger portion of Smokeless Coal than was contemplated. By the payment of the rebate discussed in another place, the actual use of the larger percentage of Smokeless Coal would be taken care of. But the matter is of importance in considering the question of the burning of the coal, since the Smokeless Coal is the one that gives most trouble from fire, the Boomer Coal by itself rarely giving any trouble unless set on fire by fire from Smokeless coal. This large percentage of Smokeless Coal makes necessary the storage of much larger quantities of this dangerous coal than was contemplated, and thus the effect of the burning is not only doubled by the use of double the percentage of burned coal, but also the liability to fire is much increased.

Procedure: Section 6 of the contract states that "The Solvay Company shall employ the M. C. & G. Co. to operate the entire plant, including the ovens, the by-product plant, coal handling, etc., all of which shall be paid for by the Coke Company." Later in the same paragraph it states, "it being the intent and purpose of this agreement that the Solvay Company shall retain sufficient supervision and control of the entire plant to insure the recovery of by-products of the normal quality and quantity."

It will be necessary for M. C. & G. Co., if they wish the ovens to run, to dispose of the heated coal in some other way than charging in the ovens, and to supply for the oven operation coal that has not been damaged by heating.

V.

WATER IN COAL.

The question of payment of rental and operating charge upon excess of water in coal was taken up by correspondence in February, 1907. At that time Mr. Schlesinger seemed to recognize the correctness of our contention, that we should not be called upon to pay rental and operating charge upon water added to the coal after its purchase by the M. C. & G. Co.

The Government reports of the West Virginia region show, for Pocahontas Coal, an average of .25% of water in coal as mined, taking an average of 38 Pocahontas mines. Inasmuch as the M. C. & G. Co. obtains its entire coal supply during the summer, it is weighed at a time of minimum moisture. A fair maximum average for the coal as weighed for shipment from the West Virginia region would not be above 1.5% water. We accordingly concede that percentage as a proper basis.

In the coal as charged at Milwaukee, the percentage of water has been as high as 6.28%, and is commonly above 4%.

Water is added to the coal by the M. C. & G. Co. in the following ways:

First—Storing Under Water: At present a considerable portion of the coal pile is under water, so that the coal is often dug from below the surface of the water.

Second—Fighting Fires: On account of fires in the coal large amounts of water have been added to the coal by almost continuous streams from fire hoses during the winter, and by frequent visits of the City fire-boat. Appendix "A" gives the detail of the water in the coal by months since the plant began operation, and shows the large amount of money paid by the S. S. Co. on water from which it received absolutely no return.

Third—Moving Coal by Flooding: To reduce the M. C. & G. Co.'s expense in handling the coal, the City fire-boats have been used to wash the outside coal within reach of the bridge.

The calculations on which the contracts were based were made on coal free from moisture. Mr. Greim has admitted to Mr. Whitwell that he knows this is the custom of S. S. Co. As stated, however, we are willing to concede 1.5% of water in the coal and to calculate tonnages, rental and operating charge on that basis. This shows that the S. S. Co. is entitled to a return of \$17,783.69 plus interest at 6% for amounts already paid for operating charge on excess water over 1.5%, and \$11,012.01 plus interest at 6% on rental paid on excess water over 1.5%. In future the rental and operating charge should be calculated on this basis. These claims should be reduced by \$463.72 plus interest at 6% for excess of rebate on gas enrichment, making a net amount due S. S. Co. of \$28,331.98 plus interest at 6%.

The M. C. & G. Co. had it within their control to avoid part of this excess of water by draining the coal pile and by avoiding the use of burned coal, and by using more expensive methods of coal handling than washing it down; so that they are entirely responsible for much of the addition of water. We note that the work of draining the coal pile has begun, and that the pile is to be drained and filled in sufficiently to bring all the coal above the river level so as to effect better draining. Normal 1.5% should still apply.

Gas to Evaporate Excess Water: The addition of this excess

of water has made necessary the combustion of a large amount of gas for driving off this water. Each per cent. of water in coal requires 123 cubic feet of additional gas @ 470 B. T. U. per cubic foot per ton coal to be burned to drive off the water. In Appendix "A" is shown the quantity of gas burned to drive off this water, which, at 10c per M. feet, has a value of \$28,623.52 plus interest, from May 1, 1906, to March 31, 1908.

The above calculations are made on official moisture determinations made by the M. C. & G. Co.'s chemists on samples of coal taken by the M. C. & G. Co.

Procedure: The M. C. & G. Co. should pay to S. S. Co. \$28,331.98 plus interest for rental and operating charge paid on excess water, and \$28,623.52 plus interest for gas required to drive off this excess water. Henceforward, all calculations regarding coal tonnages should be made on the basis of subtracting water in excess of 1.5%. The amount of water in the coal will be determined by samples taken and analyzed jointly by S. S. Co. and M. C. & G. Co. The M. C. & G. Co. should pay the S. S. Co. at the rate of 10c per M. for all the gas consumed in driving off this excess water, calculated at the rate of 123 cubic feet per ton coal for each 1% excess moisture over 1.5% in the coal.

VI.

GAS CONSUMPTION.

Query: What right does the contract give to the M. C. & G. Co. to use gas from the coal coked? Section 6 states: "The Coke Company * * * shall furnish all labor and material for the operation of said plant and pay therefor." Section 6 states: "Any and all by-products shall be the property of the Solvay Company." The second clause of the preamble defines the by-products as "gas, tar and ammonia."

If the contract should be construed in the literal sense applied to some of its provisions by M. C. & G. Co., it would result that S. S. Co. owns all the gas produced, including the gas used in the oven flues for coking the coal, and that M. C. & G. Co. is not entitled to use any of the gas even for that purpose without paying for it. The contract specifies in terms exactly how much S. S. Co. is to pay for "operating cost." There is no suggestion anywhere that it is to contribute anything toward the cost of operating the plant beyond the fixed amount per ton thus specified except in the case of L. O. brought in from outside.

M. C. & G. Co. may say that S. S. Co. used the gas for various operating purposes during the time that it was operating the plant, hence M. C. & G. Co. has now the right to use it. The conditions are essentially different now from what they were then. At that time the S. S. Co. was operating the plant, supplying and paying for

the materials used for operation; hence it made no difference whether it used its gas from the coal or some other means of accomplishing certain results. This question could not arise at that time. When the operation was taken over by M. C. & G. Co., however, it makes a great difference financially to S. S. Co. whether its gas is used or some other material supplied for the purpose by M. C. & G. Co.

Supposing, however, that M. C. & G. Co. is to be allowed to use the necessary amount of gas for coking the coal, without paying for it (a proposition S. S. Co. would be willing to concede by way of compromise, in connection with a fair construction of the contract obligations of M. C. & G. Co.), the points just referred to make it clear beyond question that M. C. & G. Co. is not entitled to use any part of the gas whatever beyond what is strictly necessary, under proper operating conditions, in the oven flues to coke the coal. What would be surplus gas if the operation were properly conducted must be considered as surplus gas even though burned in the ovens through defective operation. In the same way, gas that would be produced if proper coal were used must be paid for as if it had been produced. What ought to be delivered must be paid for if not delivered. The M. C. & G. Co. is familiar with the terms of the S. S. contract with the Milwaukee Gas Light Company, which is referred to by date in Paragraph 14 of the contract, and is aware of the fact that all shortages on gas that ought to be delivered from the coke ovens deprive the S. S. Co. of profit on sales thereof to the Gas Light Company.

When S. S. Co. granted to M. C. & G. Co. the privilege of raising the ovens from 4-high to 5-high, there was coupled with it a condition, namely, that there should be no loss of by-products to S. S. Co. That the M. C. & G. Co. has far exceeded any possible legitimate use of S. S. Co.'s gas without paying for it, and has violated its agreement that there should be no loss due to the change to 5-high, is shown by the following:

Burning for Coking the Coal: More gas is burned at Milwaukee for coking a given coal tonnage than is necessary. The consumption is unnecessarily high throughout the plant and particularly bad on Block No. 3, which was rebuilt by M. C. & G. Co. of silica brick on lines prepared by them. In order to enable them to burn the great excess of gas put into the flues of this block, a fan was installed, which gave a very high suction. Even under these conditions the efficiency of this block has been low. A comparison of Block No. 1 at Chicago with Block No. 3 at Milwaukee, both being 5-high blocks of 40 ovens, of same width, shows the poor work at Milwaukee. The Milwaukee block had the advantage of silica brick, and high draft due to the fan; the Chicago block being built of Quartzite brick, walls of standard thickness, and using natural draft. From November 9, 1907, to December 14, or